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A Review of California Office of Statewide Health Planning and Development, Health Workforce Pilot Projects Program 1973-2007

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The mission of the Center for the Health Professions is to transform health care through workforce research and leadership development.

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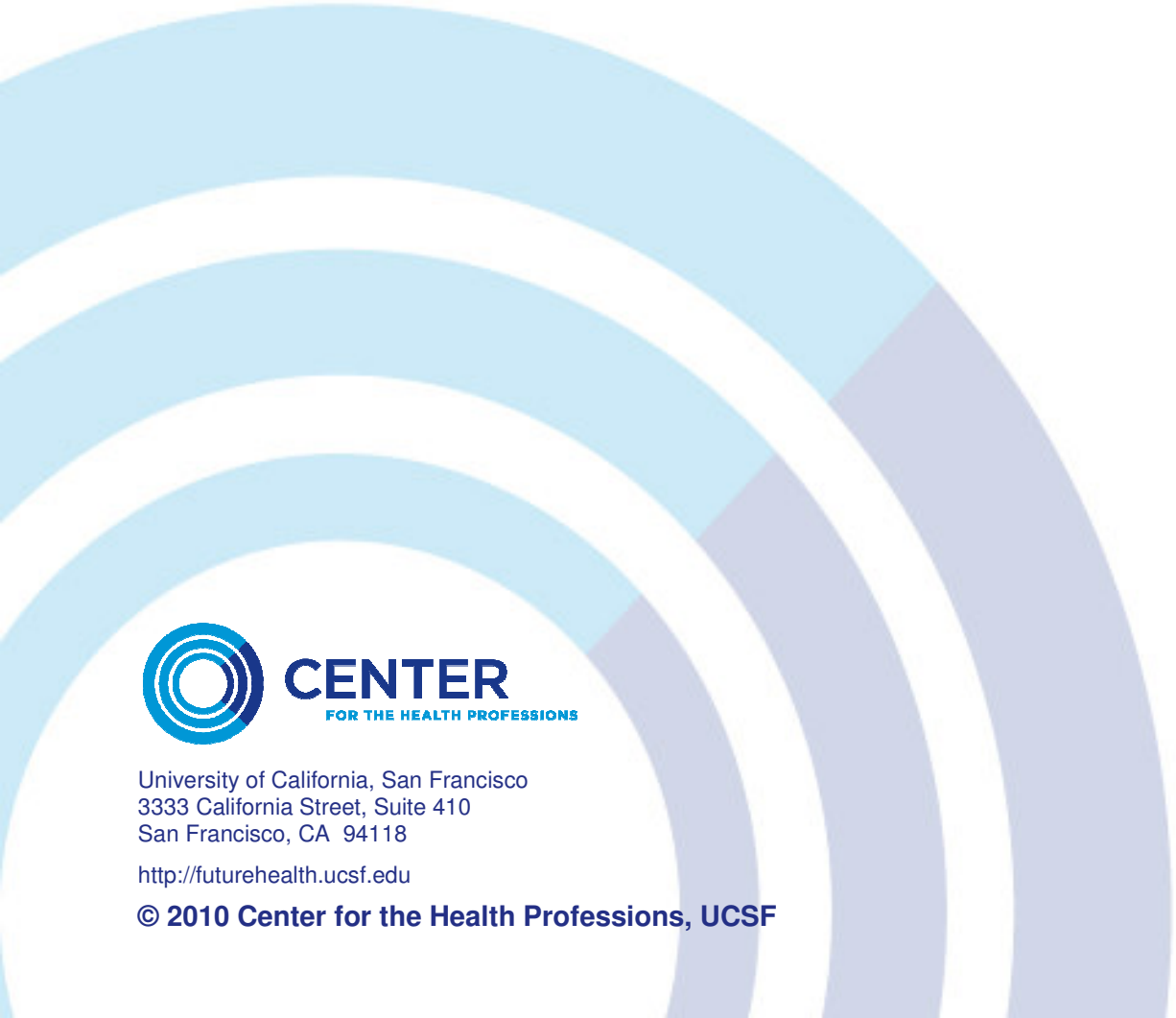

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Summary

California's Health Workforce Pilot Projects (HWPP) program was established in 1972[1] and is administered by the Office of Statewide Health Planning and Development. The HWPP program offers an opportunity to safely demonstrate and evaluate new approaches to care delivery before changing laws and regulations. HWPP demonstrations can allow health care workers to acquire new skills; develop new health care occupations or accelerate training in existing categories; or teach new roles to providers with no prior training. The HWPP program has played a role in the passage of pivotal legislation, such as the Nurse Practice Act, Dental Practice Act, and Emergency Medical Services Act, among many others. Between 1973 and 2005, a total of 171 applications were made to HWPP. The majority of these were approved and implemented. Following are some of the key findings from three decades of HWPP projects.

Role of HWPP in Legislation: More than 65 percent of the approved and implemented projects affected some type of policy change. At the same time, many pilot projects appear to have been run well with exemplary results for the practitioners and patients in terms of improved access, cost savings, or health outcomes, but these results were not always sufficient to create regulatory change. Other projects encountered enough opposition from organized unions or powerful political lobbies that actual policy changes came only after years of battle in the politician arena at great financial cost.

Sponsor Type: UC System and California State University-sponsored projects have achieved some type of regulatory or legal change in over 80 percent and 60 percent, respectively, of their pilot applications. Community clinics have never achieved a policy change through HWPP; however their organizational sophistication is arguably much higher today than when the bulk of the projects were run in the 1970's.

Funder Type: Correlation to regulatory outcomes is weaker for funder type than sponsor type; in other words, while sufficient funding is necessary, funding source may not be critical to success. Governmental funders, large granting organizations, and large hospital networks, including the Kellogg Foundation and the Kaiser Foundation Hospitals, have been successful in their HWPP applications.

Site Problems: A number of pilot projects have failed due to recruitment or site problems often related to the departure of a key administrator or director making it clear that support at multiple levels within the sponsor's leadership structure is a vital component. Additionally, the length of time from application to approval by HWPP has increased from an average of nine months through the 1980's to an average of 18 months since 1990, which may tax the ability of some organizations to invest in a pilot project though HWPP.

Practitioner Type: The nursing professions achieved some type of policy change in more than 60 percent of their pilots. Many of these were coordinated efforts demonstrating the same objectives at multiple locations. Other practitioner groups, including EMTs and dental auxiliaries, followed the same model with success.

[1] The program was originally called the Health Manpower Pilot Projects program. In 2007, the name was changed to the Health Workforce Pilot Project. For consistency in this document, we refer to the program throughout its history under its current name, Health Workforce Pilot Project, and acronym, HWPP.

HWPP Review Methodology

We primarily relied on two sources for the information used to determine the various categories and outcomes that follow. The first of these are the "Health Manpower Pilot Projects Program Annual Reports,"[2] which were prepared by OSHPD or its predecessors and submitted to the California State Legislature. These reports were submitted annually from 1973-1991, when the law requiring these reports was changed. No Annual Reports were submitted in 1977, 1984, 1985, and 1986. In addition, we reviewed the "Journal of the Health Workforce Pilot Projects Program,"[3] which provided summaries of the all the pilot applications submitted to HWPP between 1973 and 2005. These summaries are retrospective, and most appear to have been written well after the applications were submitted. The exact dates or even years in which these summaries were written are not known.

Findings

Of the 171 applications submitted to HWPP to date, 121 were approved, though only 115 were actually run. Of the pilots run under the auspices of HWPP, 75 have played a role in health care legislation in the state of California. Some of the significant pieces of legislation impacted by HWPP pilots include the Nurse Practice Act update of 1975; the Dental Practice Act update of 1975; the recognition of Certified Nurse Midwives in 1975;[4] the Emergency Services Act update of 1980; the granting of authority for nurse practitioners (1986), physician assistants (1983), and pharmacists to order and furnish medications and medical devices (1983); and the recognition of Registered Dental Hygienists in Alternative Practice in 1991.[5]

Frequently, several pilots were run simultaneously to demonstrate the same or a similar concept. However, broad-based support from sponsors, funders, and practitioner groups is not always a clear predictor of regulatory change. The creation of Registered Dental Hygienists in Alternative Practice (RDHAP), for instance, took nearly 20 years despite widespread support and a successful HWPP pilot that spanned 16 years. Physician Assistants were given the authority to furnish and dispense medical drugs and devices immediately after running only two pilots, and Pharmacists were able to do the same after successfully running only one pilot. Nurse Practitioners, on the other hand, ran seven pilots successfully and still fought for three years prior to gaining the same authority. The case studies attached discuss their experience in greater detail.

For each piece of legislation impacted by HWPP projects, fewer than ten pilots were run to compile evidence of trainees' competence, though these were often run over relatively long periods. The Nurse Practice Act is an exception to this with approximately 40 pilots run which were designed to demonstrate nurses' ability to function in expanded roles. To some extent, this quantity is reflective of the fact that HWPP was used more extensively at its outset than it was in later years. In fact, 50 percent (n=85) of all applications to HWPP were submitted before 1975. It is not clear why nurses took greater advantage of HWPP than did dental auxiliaries, though an extended duty committee under the Board of Dental Examiners had already been created to craft a certification process for expanded role dental auxiliaries under AB 1455 (Duffy 1974).[6]

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[2] The name of the California State department under which HWPP was housed has changed as California's governmental structure has evolved. Consequently, the HWPP Annual Reports to the Legislature are cited as follows:
For 1973/74: California Dept. of Health, Office of Planning and Inter-Governmental Relations [Sacramento] Office of Planning and Inter-Governmental Relations, Manpower Development Section.
For 1975: California Dept. of Health, Health Manpower Development Section [Sacramento] Health Manpower Development Section, Manpower Administration Branch, Division of Administration.
For 1976: California Dept. of Health, Office of Health Professions Development [Sacramento] Health Professions Development. **Experimental Health Manpower Pilot Projects; Annual Report to the Legislature, State of California and to the Healing Arts Licensing Boards**.
Other Years: California Office of Statewide Health Planning and Development (1978-1983 and 1987-1991). **Health Manpower Pilot Projects Program; Annual Report to the Legislature and the Healing Arts Licensing Boards**.
In this document we will cite the Annual Reports as "YEAR HWPP Annual Report."

[3] Robertson, G. Journal of the Health Workforce Pilot Projects Program. Healthcare Workforce and Community Development Division [A Division of California Office of Statewide Health Planning and Development]. (undated).

[4] The exact date for this legislation, SB 1332 (Beilenson) is somewhat unclear. The HWPP Journal refers to this legislation as part of the Statutes of 1973 in most entries, but indicates that it did become law until 1975. It further notes that certification for nurse midwives under this legislation was not implemented until 1977. The Journal's introduction, however, states that SB 1332 was passed in 1974 and implemented in 1976. We will refer to the law as SB 1332 (Beilenson) 1974, but we do not know that this is accurate. We have grouped the pilots associated this legislation along with those that resulted in legislative change.

[5] Chapter 753 allowed recognition of those RDHAP who were trained under Pilot 155 and had established an independent practice by 1997.

[6] Day in Sacramento. (1974, March 14). *Los Angeles Times*, p. D14.

Summary Statistics

Though the results of the individual pilot projects speak for themselves, it is useful to understand their broader impacts in the social and political context of the day. The simple summary statistics shown in Tables 1-4 provide a broad overview of the pilot programs run between 1973 and 2007. These tables reflect the historical distribution of pilot sponsors, funders,[7] purposes, and practitioner types.[8] Readers are also encouraged to review the attached case studies for deeper insight into the sometimes complicated process of creating regulatory change.

Table 1. Pilot Sponsor Type

Free or Community Clinic	CA State University System	UC System	Community College System	Private Educational Institution	Private Hospital	County Agency/ Public Hospital	Other
9	14	26	11	25	26	48	12
5%	8%	15%	6.5%	14.5%	15%	28%	7%

- Nearly 30 percent (n=48) of the HWPP pilot program applications submitted between 1973 and 2005 were sponsored by County Agencies or Public Hospitals;
- Educational institutions as a group accounted for 44 percent (n=76), with the UC System schools and Private Institutions representing the largest share of those;
- Private, non-profit hospitals submitted the same number of applications (n=26) as the UC System did, each accounting for approximately 15 percent of the total HWPP applications;
- Free or Community Clinics submitted only 5 percent (n=9) of the applications to HWPP;
- The "Other" category represents the remaining 7 percent (n=12) of applications. Four of the groups in this category are joint partnerships between an educational institution and a health services provider. The remaining 8 for the most part appear to have been education or advocacy groups, many of which are now defunct making their classification more difficult to determine.

Table 2. Pilot Funder Type

Federal	State	County	School/ Educational Institution	Public Hospital	Private Funder	Joint Funding
17	13	17	40	4	40	38
10%	7.5%	10%	23%	2%	23%	22%

- Of the 171 applications submitted to HWPP, 169 listed a funding source. The remaining 2 did not identify a proposed funder;
- Educational Institutions and Private Funders were each listed as the funding source for 23 percent (n=40) of applicants. Private funders include foundation grants, private hospitals and clinics, and trade associations;
- Jointly funded ventures represent 22 percent (n=38) of applications. These arrangements present opportunities for public/private ventures allowing, for example, private medical centers and hospitals to partner directly with government agencies and universities;
- Federal-level and County-level funding sources each accounted for 10 percent (n=17) of the stated funding sources;
- The State of California was listed as the funder in 7.5 percent (n=13) of pilot applications, including set-asides in legislation, grants, and state agency funds;
- The remaining 2 percent (n=4) of applications cited funding from public hospitals.

[7] HWPP restricts pilot sponsors to community hospitals or clinics, nonprofit educational institutions, or government agencies engaged in health or education activities, though other clinical settings may also be approved. HWPP does not restrict funders or funding sources in any way.

[8] Pilot purpose does not always overlap with the practitioner targeted. For example, a pilot focused on oral health for school children might target a school teacher who is not trained as an oral health care provider. A pilot intending to expand the role of nursing may target any type of Advanced Practice Nurse, an RN, or more than one type of practitioner.

Table 3. Purpose of Pilot Program

Extend Role of Nursing	Extend Role of PAs	Extend Role of Dental Workers	Relevant to Mental Health Workers	Extend Role of Pharmacy Workers	Extend Role of Medical Auxiliaries	Train Previously Untrained Workers	Relevant to Other Category of Worker
85	3	32	5	7	27	19	8

- Because pilot program applications often list more than one purpose and can address multiple types of care providers the number of purposes shown in Table 3 totals more than 171. For this reason, the percent that each category of purpose represents out of the total number of pilots has not been calculated.
- Slightly more than 40 applications proposed the creation of a new category of health worker, and more than 140 pilots proposed to extend new skills to existing categories of health workers;
- Because Advanced Practice Registered Nurses (APRNs), Registered Nurses (RNs), Licensed Vocational Nurses (LVNs), Nurse Assistants, and Nurse Aides are grouped together under "Nursing," the largest share of pilots focused on extending the role of nursing with a total of 85 pilots;
- Only 3 of the proposals intended to extend the role of Physician Assistants (PAs);
- Dental workers, including Dental Assistants, Dental Hygienists, Dental Students, and Dentists, accounted for approximately 32 of the applications proposed;
- Just 5 pilots were relevant to the field of mental health workers. Each of these targeted a different type of practitioner. Two of these developed PhD-level training for mental health workers targeted RNs, volunteer counsels, and school teachers, respectively.
- Seven projects were intended to extend the role of pharmacy workers, including pharmacy assistants, pharmacy technicians, and pharmacists;
- Medical auxiliaries accounted for 27 applications, which proposed extended the roles of EMTs, laboratory assistants, and other medical technicians;
- Nineteen pilots were designed to train lay people, or previously untrained workers to provide some type of health care;
- Eight projects targeted some other category of worker such as podiatrist or neuro-kinesiologist, or attempted to provide accelerated training for existing categories of health care workers;

Table 4. Pilot Program Practitioner Type

APRN	RN	LVN	Dental Workers	PA	Pharmacy Worker	EMT	Various/ Several	Other Health Worker
46	15	12	29	3	7	16	19	24
27%	9%	7%	17%	2%	4%	9%	11%	14%

- The largest share of HWPP pilots, approximately 27 percent (n=46), were targeted to Advanced Practice Nurse Practitioners (APRN). Five of these pilots were directed at Certified Nurse Midwives (CNM), and one was for Certified Registered Nurse Anesthetists (CRNA). The remaining 40 were Nurse Practitioner (NP) pilots;
- Registered Nurses (RNs) accounted for 9 percent (n=15) of the HWPP projects, though it should be noted that many of the NP pilots were designed to train RNs to become NPs;
- Close to 7 percent (n=12) of the HWPP projects were developed for Licensed Vocational Nurses (LVNs);
- Pharmacy workers were targeted in 4 percent (n=7) of HWPP pilots. Of these, 5 were for pharmacists, and 2 were for pharmacy assistants or technicians;
- Dental workers were the focus of 17 percent (n=29) of the pilots. Of these, 5 proposed training for dentists or dental students;
- Physician Assistants (PAs) as a group used the pilot process less than any other practitioner group. Only 2 percent of HWPP proposals (n=3) were designed specifically for PAs. All 3 of the PA pilots were run pursuant to the legislation authorizing HWPP pilots to test drug prescribing and dispensing for mid-level practitioners;

- Approximately 16 percent (n=27) of the pilot applications proposed to train Medical Auxiliaries. Of these 27, 16 targeted EMTs for additional training. In addition, 1 pilot was designed for NPs who hold certification as EMTs, which was counted as an NP pilot;
- More than 11 percent (n=19) of proposed projects were intended to provide training across more than one group of practitioners. The distribution of these mixed groups are shown below:
    - Dentists working with Dental Auxiliaries (3 projects);
    - NPs working with RNs (4 projects);
    - Certified Nurses (including NPs and RNs) working with untrained workers or support occupations (5 projects);
    - Physicians working with Certified Nurses (including NPs and RNs) (4 projects);
    - Support occupation mixes, including aides, technicians, and LVNs (3 projects).
- Fourteen percent (n=24) of the pilots were to designed train other categories of workers. These other categories include:
    - Medical, laboratory, or nursing assistants or technicians (6 projects);
    - Previously untrained workers (12 projects);
    - Masters, doctorate-level, or other professional training for provision of medical services (4 projects); and
    - Podiatrists (1 project).

Outcomes

As noted above, approximately two-thirds of the applications submitted to HWPP were approved and run (n=115). Of those that were approved and run, there were several reasons for their termination,[9] including a regulatory change, a request from the sponsor to discontinue the program, and "other" reasons. Of the 50 applications that were not approved by HWPP, only 5 were denied. The remaining 45 were withdrawn by the sponsors during the review process. An additional 6 applications were approved, but never activated. The distribution of results for pilots terminated at the request of the sponsor, terminated for "other" reasons, withdrawn or denied, and never activated are shown in the following tables; however the deeper analysis that follows does not include either those pilots that were never activated (n=6) or those for which is outcome is unclear (n=4).

Table 5. Pilot Program Outcomes

Category	Not Approved or Not Run		Approved and Run			Total[10]
	A	B	C	D	E	
Outcome	Withdrawn in review or denied by HWPP	Approved and not activated	Change in law, policy, or regulation	Terminated at the sponsor's request	Terminated for "other" reasons	
Total	50	6	75	19	17	167
	30.00%	3.60%	45.00%	11.37%	10.18%	100.00%

- Almost a third of applications (n=50) were not approved by HWPP. Ninety percent of these (n=45) were withdrawn by the sponsors during the review process, while the remaining 10 percent (n=5) were denied by HWPP staff;
- Only 3.6 percent (n=6) of applications were approved by HWPP, but never activated;
- Close to 50 percent (n=75) of applications submitted to HWPP were run and eventually resulted in some sort of regulatory change;
- Nearly equal numbers of applications were terminated at the sponsor's request (n=19) or terminated for "other" reasons (n=17).

[9] The HWPP staff used the term "terminated" to signify the end of any pilot program that was not denied or withdrawn in review. We have defaulted to the classification provided by the HWPP Annual Reports as they are more likely to be historically accurate than later sources of information.

[10] This total does not include pilots for which the outcome is unclear (n=4).

Table 6. Pilot Program Outcomes Category A: Pilots Withdrawn During Review or Denied by HWPP (n=50, 29.2% of all HWPP Applications)

Withdrawn during review or denied	Withdrawn in Review							Denied
	Law change	HWPP coverage not required	Didn't meet HWPP rules	Political Problems	Fiscal problems	Reasons unclear	Total withdrawn	Didn't meet HWPP rules
Total	9	8	19	3	3	3	45	5
% of all applications submitted	5.3%	4.7%	11.1%	1.8%	1.8%	1.8%	26.5%	2.9%

- Nearly 30 percent of pilot applications were withdrawn by the sponsor during the review process or denied by HWPP. In part, due to HWPP's efforts to assist applicants in crafting pilots that would meet HWPP requirements and result in successful pilots, only 3 percent (n=5) applications were denied by HWPP staff;
- Just over 5 percent (n=9) of all applications were withdrawn during the review because of a statutory or regulatory change that made coverage under HWPP unnecessary for the proposed pilot;
- Slightly less than 5 percent (n=8) pilots were withdrawn because coverage under HWPP was never needed. It is possible that these potential sponsors did not conduct adequate legal research prior to submitting an application to HWPP or that the laws were unclear;
- The largest share of pilots in this category, representing 11.1 percent of all applications (n=19), were unable to meet HWPP requirements;
- Equal numbers of pilot applications were withdrawn due to political and fiscal challenges to proposed extended functions, each accounting for 1.8 percent of applications (n=3);
- No reason was provided as to why an additional 1.8 percent (n=3) of applications were withdrawn.

Table 7. Pilot Program Outcomes Category B: Projects Approved but Never Activated (n=6, 3.6% of all HWPP Applications)

Never Activated	Reasons unclear	Law change	Fiscal problems	Total
Total	1	4	1	6
% of all applications submitted	0.6%	2.3%	0.6%	3.6%

- Four of the 6 applications that were approved but never run were EMT-II pilots. Readers wishing to know more about these four should refer to the attached case studies;
- Fiscal difficulties were the cause one approved pilot project was not run, and no reason was given as to why one additional project was approved but not run. Each represents 0.6 percent of all applications submitted to HWPP.

Table 8. Pilot Program Outcomes Category C: Pilots Resulting in a Regulatory Change

Regulation or Legislative Change	Number of pilots	% of all apps submitted
Nurse Practice Act (NPA) update of 1975	40	23.40%
Dental Practice Act (DPA) update of 1975	8	4.70%
Certified Nurse Midwives SB 1332 (Beilenson) 1974	3	1.75%
Emergency Services Act SB 125 (Garamendi/Torres) 1980	4	2.30%
PA Drug Dispensing, Section 1399, 541[h], Title 16, California Code of Regulations, 1983	2	1.20%
Pharmacy Drug Dispensing AB 502 (Maddy) 1983	2	1.20%
NP Drug Dispensing 1986 AB 4372 (Isenberg) 1986	7	4.10%
RDHAP, Statutes of 1991, Chapter 753	1	0.60%
Other regulatory change	8	4.6%
Total	**75**	**44%**

- As discussed above, the largest share of pilots that resulted in statutory or regulatory changes were targeted to create the Nurse Practice Act update of 1975 with 23.4 percent (n=40) of pilots;
- The Dental Practice Act update of 1975 was affected by almost 5 percent (n=8) of the pilots that resulted in legal changes;
- Three pilots were run to gather evidence in support of the recognition of Nurse Midwives, and 4 were run successfully to update the Emergency Services Act;
- Taken together, the drug dispensing pilots accounted for 11, or 6.5 percent of the pilots resulting in a legal change. NP pilots accounted for the largest share of these with 7 pilots, or 4.1 percent of the total;
- Registered Dental Hygienists in Alternative Practice (RDHAP) ran one pilot that resulted in a legal change;[11]
- A total of 8 additional projects provided data used in creating legislative change. The HWPP Annual Reports note these projects as "Terminated – law change," but do not clearly identify the exact law that was changed.

Table 9. Pilot Program Outcomes Category D: Pilots Terminated at the Request of the Sponsor

Sponsor's Choice	No regulatory change	Recruitment or site problems	Program ongoing	Total
Total	7	9	3	19
% of all applications submitted	4.1%	5.3%	1.8%	11.1%

- Just over 11 percent of all applications submitted to HWPP were approved and run only to be terminated at the request of the sponsor;
- Sponsors requested to terminate 4.1 percent of projects (n=7) with no regulatory change despite running successful pilots;
- Sponsors requested termination due to difficulties in recruitment or retention of trainees or because of problems with administration of the site in just over five percent of pilots (n=9). Six of these 9 were LVN pilots. Please see the attached case study for more information;
- In 3 pilots, the sponsors determined with HWPP that no legal barriers existed to the pilot programs and the sponsors continued to run the program without HWPP coverage.

[11] In fact, two pilots were run to gather evidence on RDHAP, but the first of these was terminated due to a Court Order rather than because of a legal change. Please see the relevant case study for more information.

Table 10. Pilot Program Outcomes Category E: Pilots Terminated for "Other" Reasons

Terminated "Other"	Could not maintain HWPP rules	Political problems	Fiscal problems	Reasons unclear	Outcome unclear	Total
Total	6	1	8	2	4	21
% of all applications submitted	3.5%	0.6%	4.7%	1.2%	2.3%	12.3%

- In 12 percent (n=21) of pilots approved and run, the project was terminated for reasons other than those identified in the categories previously identified;
- Sponsors were unable to maintain HWPP requirements in 3.5 percent of pilots (n=6);
- One pilot was terminated by Court Order under a lawsuit brought against HWPP by the California Dental Association. Please see the relevant case study for more information on this pilot;
- Nearly 5 percent (n=8) of pilots had fiscal problems leading to their termination.
- Just over 1 percent of pilots (n=2) were terminated by HWPP, though no reason was given in the Journal of the Health Workforce Pilot Projects Program or in the Annual Reports;
- Outcomes are not clear for 2.3 percent of the pilots. One of these is still active. Those pilots with unclear outcomes are not included in the analysis that follows.

Table 11. Pilot Program Outcomes, By Type of Sponsor

Sponsor Type	Not Approved	Approved and Run			Total[12]
	Withdrawn in review or denied by HWPP	Change in law, policy, or regulation	Terminated at the sponsor's request	Terminated for "other" reasons	
Free or Community Clinic	5 55.55%	2 22.22%	0 0.00%	2 22.22%	9 100.00%
CA State University System	4 28.57%	9 64.29%	0 0.00%	1 7.14%	14 100.00%
UC System	2 8.33%	20 83.33%	0 0.00%	2 8.33%	24 100.00%
Community College System	3 33.33%	4 44.44%	1 11.11%	1 11.11%	9 100.00%
Private Educational Instit.	8 32.00%	7 28.00%	5 20.00%	5 20.00%	25 100.00%
Private Hospital	7 30.43%	5 21.74%	9 39.13%	2 8.70%	23 100.00%
County Agency/ Public Hospitals	14 31.11%	24 53.33%	3 6.67%	4 8.89%	45 100.00%
Other	7 58.33%	4 33.33%	1 8.33%	0 0.00%	12 100.00%
Total	**50 31.06%**	**75 46.58%**	**19 11.80%**	**17 10.56%**	**161 100.00%**

- Pilots sponsored by the UC System have historically resulted in changes in law, policy, or regulation almost 85 percent (n=20) of the time;
- The UC System was followed by California State Universities, which were associated with changes in law, policy, or regulation in close to 65 percent (n=9) of the pilots they sponsored;

[12] As noted above, this total does not include pilots that were approved but never activated (n=6) or those for which the outcome is unclear (n=4).

- Pilots sponsored by private, non-profit hospitals accounted for almost 50 percent (n=9) of all pilots that were terminated at the request of the sponsor without any change in law, policy, or regulation. These 9 pilots accounted for close to 40 percent of all the pilots sponsored by private hospitals;
- The education or advocacy networks that largely form the "Other" category were most likely to withdrawn their pilot applications during the review process (58 percent, n=7), followed closely by free or community clinics (55.5 percent, n=5);
- A total of 5 pilots were denied by the HWPP, 3 of which were sponsored by private educational institutions. Of the remaining 2 pilots denied by HWPP, 1 was sponsored by a free/community clinic, and the other was sponsored by a county agency/public hospital.

Because political, recruitment, and fiscal problems can be a major hurdle to pilot programs, the following table draws these out in greater detail.

Table 12. Distribution of Political, Recruitment, Site, or Fiscal Problems for Pilots either Withdrawn in Review (Category A), Terminated at the Request of the Sponsor (Category D), or Terminated for "Other" Reasons (Category E), By Type of Sponsor

Sponsor Type	Political Problems	Recruitment or Site Problems	Fiscal Problems	Total "Problem" Projects	Total Projects Submitted
Free or Community Clinic	0	0	0	0	9 (0%)
CA State University System	1	0	1	2	14 (14%)
UC System	1	0	2	3	26 (11.5%)
Community College System	0	0	0	0	11 (0%)
Private Educational Instit.	1	1	5	7	25 (24%)
Private Hospital	0	6	0	6	26 (23%)
County Agency/ Public Hospitals	1	1	3	6	48 (12.5%)
Other	0	1	0	0	12 (0%)
Total	**4**	**9**	**11**	**24**	

- Private Hospitals accounted for 75 percent (n=6) of all the recruitment or site problems, such as the departure of a key administrator. It should be noted that these six were all LVN projects, which are discussed in depth in the LVN case study;
- Political opposition to pilot programs is distributed across sponsor types. Three of the four pilots in this category were withdrawn during the review process. The fourth was terminated due to a Court Order pursuant to a lawsuit brought by the California Dental Association;
- Of the pilots that experienced fiscal difficulties, 8 of the 11 were approved and run, but terminated early due to funding problems. The remaining three were withdrawn during the review process due to a lack of funding;
- Fiscal problems account for near half (48 percent) of the total pool of "problem" projects.

Table 13. Pilot Program Outcomes, By Type of Funder

Funder Type	Not Approved	Approved and Run			Total[13]
	Withdrawn in review or denied by HWPP	Change in law, policy, or regulation	Terminated at the Sponsor's Request	Terminated for "other" reasons	
Federal	3 21.43%	8 57.14%	3 21.43%	0 0.00%	14 100.00%
State	1 20.00%	4 80.00%	0 0.00%	0 0.00%	5 100.00%
County	10 38.47%	14 53.85%	1 3.85%	1 3.85%	26 100.00%
School/Edu Institution	11 28.94%	20 52.63%	3 7.89%	4 10.53%	38 100.00%
Public Hosp	0 0.00%	3 75.00%	0 0.00%	1 25.00%	4 100.00%
Private	16 48.48%	7 21.21%	6 18.18%	4 12.12%	33 100.00%
Trade Association	1 20.00	1 20.00	1 20.00	2 40.00	5 100.00%
Joint	8 22.86%	17 48.57%	5 14.29%	5 14.29%	35 100.00%
Total	**50 31.26%**	**74 46.25%**	**19 11.88%**	**17 10.63%**	**160 100.00%**

- Funder type appears to have less impact overall relative to that of the sponsor organization;
- Approximately 46 percent of pilot applications have achieved some change in law, policy, or regulation. Most funder types have beat this average, with the exception of private sources of funding and trade association funded projects.
- Only 21 percent of private funders and 20 percent of pilots funded by trade associations have achieved any type of regulatory change;
- Private funding sources also have the highest rate (48.5 percent) of applications or withdrawn during the review or denied by HWPP. Further analysis shows that most of these withdrawals[14] occurred when the private funder was a free or community clinic or a private hospital. Larger granting organizations and larger hospital networks, such as the Kellogg Foundation and the Kaiser Foundation Hospitals, have been successful in their HWPP applications;
- Of the pilot applications that were denied by HWPP, 3 were funded by Schools or Educational Institutions. Of the remaining 2, 1 was funded by a county and the other by private sources.

[13] Two of the applications failed to identify a funding source and could not be included in this chart. One of these is also in the "Outcome unclear" category, and so is already not included in this section of analysis.
[14] Fifteen of the sixteen pilots in this category were withdrawn. Only one was denied.

Table 14. Pilot Program Outcomes, By Type of Practitioner

Practitioner Type	Not Approved	Approved and Run			Total
	Withdrawn in Review or Denied by HWPP	Change in law, policy, or regulation	Terminated at the Sponsor's Request	Terminated for "other" reasons	
APRN	9 20.00%	32 71.11%	2 4.44%	2 4.44%	45 100.00%
Registered Nurse	4 26.67%	10 66.67%	1 6.67%	0 0.00%	15 100.00%
LVN	2 20.00%	0 0.00%	7 70.00%	1 10.00%	10 100.00%
Dental Aux	9 39.13%	9 39.13%	2 8.70%	3 13.04%	23 100.00%
DDS	0 0.00%	0 0.00%	3 60.00%	2 40.00%	5 100.00%
PA	0 0.00%	2 66.67%	0 0.00%	1 33.33%	3 100.00%
Pharmacy	3 42.86%	3 42.86%	0 0.00%	1 14.29%	7 100.00%
EMT	4 36.36%	4 36.36%	2 18.18%	1 9.09%	11 100.00
Various	4 21.05%	11 57.89%	2 10.53%	2 10.53%	19 100.00%
Other	15 65.22%	4 17.39%	0 0.00%	4 17.39%	23 100.00%
Total	**50 31.06%**	**75 46.58%**	**19 11.80%**	**17 10.56%**	**161 100.00%**

- Both APRNs and RNs achieved some type of regulatory change in more than 65 percent of the pilot projects they ran. It should be noted that many of these were the same type of project run at multiple locations throughout the state providing broad evidence of the ability of this practitioner type to function in an extended role. Other practitioner groups including EMTs and Dental Auxiliaries followed the same model;
- Pilot programs targeting "Other" types of health care workers account for 30 percent (n=15) of the withdrawn or denied applications. Of these 15, 10 were simply unable to meet HWPP regulations and 7 of the 10 were designed to train previously untrained workers;
- LVN pilot projects experienced the greatest share of their pilots terminated at the sponsor's request. These projects are discussed in greater detail in the case studies;
- Dentists and PAs are the only practitioner groups to never have withdrawn an application in review to be denied approval by HWPP;
- Non-dentist oral health care workers and "Other" practitioner types were each the target of two pilot program applications that HWPP denied. The fifth pilot application denied by HWPP was intended for NPs.

The Role of HWPP in Legislative Changes

Finally, a few notes should be made on the larger lessons in the history of California's Health Workforce Pilot Program. While many pilot projects appear to have been run well with exemplary results for the practitioners and patients in terms of improved access, cost savings, and/or health outcomes, it cannot be stated strongly enough that these results are not sufficient alone to create statutory change. Several of the pilots encountered significant opposition in the form of organized unions or powerful political lobbies with actual policy changes coming only after years of battle in the political arena at great financial cost. In other cases, statutory change did not come about because of political, demographic or economic realities that took priority over the goals of HWPP projects.

None of the legal changes to which HWPP pilot projects contributed were achieved in a political or economic vacuum. Some pilot projects that resulted in change appear to have been part of an almost inevitable movement toward an expansion of scope of practice while others were much more hotly contested. In addition, it should be emphasized that only one pilot program has been run during the last decade. All of the results discussed here should be viewed with the understanding that all of the organizational types of sponsors, funders, and practitioner groups have evolved during the intervening years as has the public's and the legislature's understanding of the impacts of statutory and regulatory change on access to health care.

HWPP Case Studies

A set of five case studies are presented here to complement the research and analysis that was presented in Section Two above. These case studies present additional information and context for HWPP projects that were completed for the following activities and professions:

- Drug Dispensing
- Emergency Medical Technicians
- Licensed Vocational Nurses
- Physician Assistants (Women's Health Care Specialist)
- Registered Dental Hygienists in Alternative Practice

Drug Dispensing Case Study

In 1975, the California State legislature amended the Nurse Practice Act (NPA) to allow nurses to perform extended functions under "standardized procedures." Under standardized procedures Nurse Practitioners (NPs) are allowed to treat patients and practice what would otherwise be considered medicine under a written protocol developed collaboratively between the NP and the physician. Specific procedures, treatments, and protocols are not defined under the NPA, which created a lack of legal clarity around the real limitations of the NP scope of practice, particularly where they related to the prescribing and dispensing of medications

In response to the newly amended NPA, the California Nurses Association (CNA) wrote a memorandum in May 1975 to the sponsors of the four active expanded-role nursing pilots under HWPP advising them that they no longer needed HWPP coverage for drug prescribing and dispensing projects. HWPP was somewhat more circumspect with regard to the implications of the amended NPA and allowed pilot sponsors to remain under HWPP for drug prescribing and dispensing projects. Only one of the four pilots opted to withdraw their project under the advice of CNA.[15]

HWPP staff remained concerned by the ambiguity in the amended NPA, but nonetheless took clear positions in favor of both greater formalization of job duties and relative independence for NPs, PAs, and pharmacists. HWPP recommended to the Legislature in the Annual Report for 1975 that, "Legislature should amend the NPA [Nurse Practice Act] as to give a clear legal sanction to the performance of expanded functions by appropriately qualified nurses including: taking of medical histories; conducting physical examination; discrimination between normal and abnormal findings; [and] the treatment of common illnesses that fall within the scope of the nurse's expanded competence."

With five active drug prescribing and dispensing projects in April 1976,[16] HWPP requested that the Office of Legal Affairs at the Department of Public Health (DPH) clarify whether HWPP trainees could be authorized to prescribe and dispense or administer medication under the amended NPA. The DPH's response approved the ability of trainees to dispense, but opined that prescribing was not permissible. That same year, Federal law was created to limit the authority to dispense drugs only to those "persons licensed to prescribe," which essentially blocked HWPP from demonstrating any heath profession in drug dispensing.[17]

The California Legislature acted quickly to pass AB 717 (Duffy1977) amending the parent statute of HMPP to authorize approval for 10 HWPP pilots involving prescribing, dispensing, and administering of drugs or devices.[18] When AB 717 became effective in January 1978, the DPH extended a call for proposals to more than 200 potential sponsors. By December 1978, nine pilots had been approved by HWPP, followed by the tenth in August 1979.[19]

Over the five years that the drug prescribing and dispensing pilots were run, HWPP continued to work towards the expansion of mid-level practitioners' scopes of practice. HWPP organized several statewide meetings to bring stakeholders to the table in crafting legislation that would allow mid-level practitioners to prescribe and dispense medications. Despite very low error rates and encouraging results reported by the supervising physicians, the California Medical Association (CMA) became increasingly vocal in their opposition to the AB 717 pilots. CMA went on record in strongly worded letters to HWPP in 1980 and 1982 contending that the evaluation process of the mid-level prescribers was inadequate. In addition, CMA lobbyists were outspending the CNA by more than

[15] The active RN/NP pilots at this time were numbers 015, 023, 025, and 041. Pilot 025 opted to terminate in July 1975, per the CNA's advice.
[16] The active drug prescribing and dispensing pilots in 1976 were 015, 023, and 041 for RN/NP, and 051 and 097 for pharmacy workers.
[17] It is unclear from the various Annual Reports exactly how this change occurred. The 1976 Annual Report calls this a Federal Code, and the 1979 Annual Report states that this was a 1976 Legal Opinion, but does not say whose or with reference to what. No further information was provided.
[18] Of these ten, five were designated for RNs/NPs, two were for pharmacists, and the three were for PAs. Per AB 717, these pilots were to be completed by or on December 31, 1982, which was extended in 1982 under AB 3748 to June 30, 1983 to preserve continuity of care for the patients served.
[19] NP pilots were numbers 115, 125, & 127. Pilot 117 was for RNs. Pilots 116 & 119 were for pharmacists, and pilots 112, 20, & 124 were for PAs. The tenth was pilot 129 for both RNs and NPs. In addition, RN/NP pilots 015, 023, & 041 continued to run, though pilots 051 & 097 for pharmacy workers terminated in 1976 and 1977, respectively, for internal reasons.

$200,000 per year to defeat legislation that would have allowed NPs to prescribe and dispense in 1983, 1984, and 1985.[20]

It is worth noting that almost all of CMA's ammunition was targeted on stopping NPs from expanding their scope to prescribe and dispense. CMA and the Physicians Assistant Examining Committee agreed in 1983 to amend Chapter 13.8 of the California Code of Regulations to allow PAs to perform any task delegated by a physician, including ordering and administering medications.[21] In the same year, the legislature passed AB 502 (Maddy) giving pharmacists authority to initiate drug therapy previously prescribed by a physician. Significantly, the proposed legislation that physicians so adamantly stood against required that NPs have a written collaborative practice agreement with a physician in order to order or furnish medications.[22] This legislation didn't pass until 1986 as SB 4372 (Isenberg). Unfortunately, HWPP did not publish annual reports in 1984-1986, so much of the information around this time frame is not available. By 1987, the amount of information given in the HWPP Annual Reports was far more limited and opaque than had been this case in years prior.

[20] Walters, D. (1985, March 8). Medical Issues Become Juicy. *Sacramento Bee*, p. A3.
[21] Journal of the Health Workforce Pilot Projects Program. Ordering is the same activity as prescribing, and administering is the same as dispensing or providing medication.
[22] NPs have the authority to "order and furnish" medication, which is the same activity as prescribing and dispensing medication. The terms were the result of political compromise.

Emergency Medical Technician Case Study

In the late 1960's and early 1970's, higher incidences of cardiac events were noted in California's rural aging populations. At the time, ambulances transporting patients to hospitals usually did not provide life-sustaining care en route. In outlying communities, this could mean a wait of 45 minutes or longer for medical care. To address this problem, the Legislature authorized the testing of advanced EMTs, or EMT-IIs, to provide lifesaving or life sustaining care in ambulances under the Wedsworth-Townsend Act, Statutes of 1970.

The first HWPP EMT-II pilot was approved in 1974, but terminated early due to funding problems. In 1975, two EMT-II pilot projects were approved, followed by a third in 1976 and two more in 1977 for a total of five active pilots.[23] The 1978 HWPP Annual Report recommended that the Legislature authorize regulations for EMTs employed by rural fire departments. The 1979 Annual Report noted that the EMT-II pilots had 169 trainees in the employment/utilization phase who have "made it possible for many heart attack patients or accident victims to arrive in the hospital emergency room alive and to leave the hospital as functioning people."

The success of the active EMT-II pilots fomented interest throughout the state and in 1979 five additional EMT-II applications were submitted.[24] However, due to an unintended consequence of 1977 legislation, effective January 1, 1978, HWPP trainees in new pilots were prohibited from "administering" medication.[25] EMTs are required in the normal course of their duties to administer fluids and certain drugs, which effectively forced the HWPP to freeze applications in the review process until July 1980 when AB 3218 removed this limitation. At that point, the four pilots that survived the review period were approved until June 1981.

Meanwhile, the active EMT-II pilots continued to run and collectively had 196 trainees by 1980. HWPP recommended in its 1980 Annual Report that EMT-II be recognized as a category of emergency medical care worker, and noted that their prior recommendations to the Legislature had resulted in several bills being introduced in the 1979-1980 legislative session to recognize EMT-IIs. One of these, SB 125 (Garamendi/Torres 1980) became law in September 1980, effective January 1, 1981, removing the need for the four pilots approved in 1980.[26]

The 1981 HWPP Annual Report commended the sponsors of the EMT-II pilots for their coordination with the EMS authority in developing statewide guidelines and regulations for the profession. With little external opposition to the pilots and a willingness of the sponsors to coordinate across multiple counties, the EMT-II demonstration projects represent an excellent example of a well-conceived, well-executed set of pilots that resulted in a change of legal regulation.

[23] Pilot 047 was the first, followed by pilots 092 and 099 in 1975. Pilot 106 was approved in 1976, and pilots 077 and 107 were approved in 1977. Pilot 099 was terminated Dec. 31, 1978 when the sponsor decided to use paramedics in place of EMT-IIs. Applications numbers 109 and 130 were unable to meet the requirements of HWPP during the review process and were not approved.
[24] These were pilots 132 (San Diego County), 134 (Tulare County), 135 (San Luis Obispo), 136 (multi-county Northern California – East Bay), 137 (multi-county Southern California – Inland Empire). Pilot 136 was withdrawn during the review due to fiscal problems.
[25] The language in same legislation that authorized the drug prescribing and dispensing pilot projects, AB 717, inadvertently prohibited other pilots from doing the same.
[26] SB 125 was co-sponsored by Senator Garamendi and Assemblyman Torres (Chapter 1260).

Licensed Vocational Nurses Case Study

Beginning in the mid-1980's, California hospitals became interested in expanding the duties allowed for Licensed Vocational Nurse (LVN) staff. At the time that these LVN pilots were conceived, LVNs were allowed to add electrolytes, nutrients, blood, and blood products to existing IV's. The sponsor agencies wanted to expand this to include certain antibiotics and heparin in order to decrease interruptions to patient care. Ultimately, a total of 12 applications were submitted for LVN pilots between 1983 and 1994.[27]

The LVN pilots as a group were plagued by problems with hospital administration and difficulties in recruitment and retention of trainees. Of the nine LVN pilots there were approved and run, seven ended at the request of the sponsor. Five of those sponsors specifically cited problems in recruitment and retention of trainees as one of reasons behind the decision to end their demonstration project.

According to the 1987 HWPP Annual Report, only 25 of the 140 LVNs eligible for pilot 151 opted to participate. The 1991 HWPP Annual Report notes that 10 of the 20 LVN recruits in pilot 153 left the pilot in the first year, several of whom reportedly enrolled in associate of arts (AA) degree nursing programs. Less information is available regarding the remaining six LVNs pilots (160-165) as all were approved in 1993, which was two years after the HWPP's Annual Reports were discontinued. Despite the Annual Reports being unavailable, the Journal of the Health Workforce Pilot Projects Program indicates that pilots 163, 164, and 165 all experienced serious problems with recruitment of trainees.

It is possible that the LVN pilots were largely unsuccessful because they were not truly ready and interested in expanding their own scope of practice. However, rather than to suppose that LVNs were not prepared as a group to extend their practice duties, it is worthwhile to examine whether these pilots adequately incentivized LVN participation. The purposed expansion of scope was so incremental that it may have seemed trivial from the perspective of the LVN staff. LVNs stood to gain no greater pay, status, independence, or skills from the pilots' objectives, but by participating in the pilots they were required to take on the additional responsibilities, time commitment to training, and paperwork necessitated by the pilot process. In retrospect, the hospitals stood to gain more from extending the LVN scope of practice than did the LVNs themselves. Unfortunately, without access to closing or Annual Reports we cannot extrapolate the details of how the LVN pilots progressed.

[27] These were pilots 149, 151, 153, 158, 159, 160, 161, 162, 163, 164, 165, and 167.
Pilots 158 and 159 were unable to meet HWPP requirements and were withdrawn during the review process, and pilot 167 was approved, but never activated. The reason for termination is not clear for pilots 160, 162, and 167.

Physician Assistant (Women's Health Care Specialist) Case Study

It is not always the case that well-designed, well-run HWPP pilots follow the trajectory they initially anticipated. For example, the Women's Health Care Specialist (WHCS) projects illustrate HWPP's latitude in finding innovative and efficient solutions to meet the needs of patients, practitioners, and the regulatory bodies that serve both.

The concept of the WHCS originated at Harbor General Hospital, a Los Angeles county hospital. In 1974, Harbor General and UCLA launched two programs targeting groups of trainees with roughly the same curriculum objectives.[28] The first was a three-month program to train RNs to provide care to well women, including gynecological examinations, cancer screening, family planning and treatment for minor women's health illness. The second was a six-month program that provided the same training to lay people, or those with no previous medical education.

By May 1975, Humboldt Open Door Clinic, a free clinic in Humboldt County, had applied to run a similar pilot project.[29] In 1976, HWPP staff made no recommendation to the Legislature regarding the WHCS programs and actively questioned the utility of creating a new category of health care worker. Instead, HWPP was studying the possibility of incorporating WHCS' duties into the existing physician assistant (PA) regulatory structure to decrease the burden of creating the independent examining boards, regulations, and oversight required by a new profession.

In 1978, a third sponsor, Aquarian Effort Free Medical Clinic in Sacramento, applied to run a WHCS pilot for lay people. Although HWPP was encouraging existing WHCS pilots to fold their curricula into sub-specialty programs for PAs through their local community colleges, the Aquarian Effort pilot was approved.[30] The 1978 Annual Report noted that HWPP had successfully assisted UCLA-Harbor General in gaining recognition for their program as a Women's Health Care PA (WHC-PA) by the Physician's Assistant Examining Committee.[31]

By 1979, HWPP had brokered a further agreement to allow trainees in the other WHCS pilots to become WHC-PAs,[32] and by 1981 all but five of those trainees had successfully passed the required exams and were recognized as PAs. In course of working with the WHCS pilots HWPP reached a clear stance on the issue of creating new categories of health care providers. The 1980 HWPP Annual Report declared that "whenever appropriate, it is desirable for a new category of health worker to merge with an existing, legally recognized category. In addition to broadening the employment options for former HWPP trainees… this cuts down on bureaucratic structures and costs." While the three pilot sponsors of WHCS programs initially intended to create a new category of health care worker, their willingness to work with HWPP resulted in a successful solution for all of the parties involved.

[28] Journal of the Health Workforce Pilot Projects Program. The RN training program was pilot 009, which ran from Jan. 31, 1974 to Dec. 31, 1976. The lay person's training program was pilot 055, which ran from Jan. 31, 1974 to Dec. 31, 1981.
[29] This was pilot 094 which was approved in Dec. 1976 and terminated Dec. 31, 1981.
[30] This became pilot 128, which ran from Dec. 1, 1978 to Dec. 31, 1981.
[31] HWPP, UCLA-Harbor General, and the Division of Allied Health, Board of Medical Quality Assurance worked together to create this sub-specialty. It is not entirely clear when the graduates of pilot 009 were recognized as PAs, but the Journal of the Health Workforce Pilot Projects Program states that graduates of both of UCLA-Harbor General's WHCS pilots became PAs.
[32] Trainees from pilot 094 and 128 were given a year to prepare for and pass the PA's National Certification examination for primary care and a clinical examination originally developed for trainees of pilot 055 at UCLA-Harbor General.

Registered Dental Hygienists in Alternative Practice Case Study

The movement towards independent practice for dental hygienists had already begun to build by 1973 when HWPP entered its inaugural year. The 1981 HWPP Annual Report noted that in 1973 the State Dental Auxiliaries Task Force recommended to the Board of Dental Examiners that dental hygienists and dental assistants be allowed to function in extended roles. The following year saw the formation of a new committee under the Board of Dental Examiners to create a certification process for extended duty dental auxiliaries under AB 1455 (Duffy 1974).[33] The Dental Practice Act (DPA) was amended in 1975, effective January 1, 1976, to allow dental hygienists to work under "general supervision" by dentists as opposed to the "direct supervision".[34] It was also in 1975 that the HWPP recommended for the first time in their Annual Report that Legislature recognize the "need to develop and test a mid-level dental practitioner who can provide… services on a nearly independent basis."

Outside of the HWPP, the first semi-independent dental hygienist practice was opened in late 1976 under the amended DPA. In less than a year, the Board of Dental Examiners brought a formal complaint, allegedly under pressure from the California Dental Association (CDA), against the practice on the grounds that it functioned outside of the DPA. The matter was finally resolved in late 1978 when the Court decided in favor of the dental hygienist as an independent contractor.

Through this period from 1973-1979, approximately 18 applications were submitted to HWPP to test dental hygienists in extended functions, though the first pilot to demonstrate dental hygienists in independent practice was not submitted until 1981. HWPP approved the application as pilot 139 in the same year.[35] Significantly, pilot 139 was not designed to test dental hygienists in independent practice, but rather was an educational program to teach management skills to allow dental hygienists to operate as independent practitioners.

Pilot 139 was approved concurrently with the introduction of legislation AB 2298 (Waters and Rosenthal 1981) in the California Legislature that would have authorized the independent practice of dental hygienists under the supervision of a dentist. Given that pilot 139 was to be funded by a consortium of dental hygienists associations and the proposed legislation was authored with the assistance of the Northern and Southern California Dental Hygienists Associations,[36] it is clear that some level of coordination existed between HWPP, the pilot sponsors, and the legislators. Despite the interest and support of legislators, dental hygienists, and the public, the legislation failed in both 1981 and 1982.

Pilot 139 was not activated until 1987 ostensibly due to fiscal problems, but the details are not at all transparent. It is possible that the pilot sponsors and funders expected legislation to pass and did not actually expect to run a pilot project. Unfortunately, HWPP did not publish Annual Reports from 1984-1986, so much of the historical record is unavailable.

In February 1987, shortly after pilot 139 became active, the CDA sued OSHPD alleging that HWPP had overstepped their legal authority in approving pilot 139. By August of the same year, the Court had ruled in favor of OSHPD on all causes of action. The CDA appealed this ruling claiming that HWPP had failed to follow the appropriate approval process for pilot 139. It was not until February 1990 that the Appeals Court ruled in favor of CDA, resulting in the termination of pilot 139.

HWPP and the project sponsor coordinated to open pilot 155,[37] to which all 17 of the trainees from pilot 139 were transferred in August 1990. In the intervening years, however, pilot 139 had run very successfully. The 1990 HWPP Annual Report noted that the trainees from pilot 139 had treated more than 8,000 patients from previously underserved communities. Additionally, the 1988 HWPP Annual Report noted that the trainees had gained the right to bill DentiCal for 4 specific types of treatments.

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[33] Day in Sacramento. (1974, March 14). *Los Angeles Times*, p. D14.
[34] Siegel, B. (1977, Oct. 3). Dental Hygienist Braces for Legal Test. *Los Angeles Times*, p. F1.
[35] Pilot 139 was sponsored by the School of Business Administration and Economics, Bureau of Business Services and Research at California State University, Northridge.
[36] 1981 HWPP Annual Report.
[37] Pilot 155 was also sponsored by California State University, Northridge through the Department of Health Sciences. Like pilot 139, it was funded by dental hygienists professional associations.

Pilot 155 ran until January 1, 1998 when a category of health worker called Registered Dental Hygienists in Alternative Practice (RDHAP) became recognized under legislation passed in 1991 as Chapter 753, which changed the Business and Professional Code. Chapter 753 allowed recognition of those RDHAPs who were trained under Pilot 155 and had established an independent practice by 1997. RDHAPs are now legally allowed to practice independently. Disappointingly, 1991 was the last year in which HWPP published an Annual Report so information about the progress of pilot 155 is not available.

Despite the forward momentum of dental hygienists' path to independent practice, establishment of RDHAP took close to two decades. It is interesting that the longest battle for dental hygienists was not around an extension of duties, but a change in practice setting, that is, outside of the dentist's office. Without the benefit of Annual Reports, it is difficult to know why this fight was so protracted, but the RDHAP pilots provide an example of a well-conceived and well-run demonstration project that did not result in an expedient legal change for the targeted practitioner group.

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