

**American Association of
Public Health Physicians**

Perspectives on Training Physicians
for Public Health Careers

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Recommendation

- that this IOM Committee formally consider the set of **professional qualifications** that should represent the "gold standard" **for directorship of state health departments and at least the larger local health departments**
- and the steps to be taken to bring health departments nationwide to that "gold standard."

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**Why Focus on State and Local
Health Departments?**

- the heart of our national public health infrastructure
- Easiest to change, from a national perspective
 - Rapid turnover of leadership staff
 - Recognition of weakness of Public Health Infrastructure
- Once established, the rest (of the public health infrastructure) can easily follow

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Charge to this IOM Committee

- (from the Committee 4/27/06 agenda pack)
- 1. -- physicians play an important role in public health and are critical for public health preparedness
- 2. Determine knowledge and skills needed by public health physicians
- 3. How many training programs
- 4. How these training programs should be funded

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1. Physician Roles in Public Health

- Policy/Management
- Epidemiology
- Clinical

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2a. Training Needed for Physicians in Public Health Roles

- Policy/Management
 - General medical training
 - Epidemiology
 - Policy/management/leadership
- Epidemiology
 - General medical training
 - Epidemiology
 - New: Policy/management/leadership
- Clinical
 - General medical training

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2b. "PHP"

- Public Health Physician ("PHP") = a physician with GPM/PH or EIS training
- **MD+MPH is not a PHP**
- Not all physicians employed in public health settings need be PHPs
- All physicians should have some basic training in Public Health and Preventive Medicine for optimal performance in their clinical roles

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3a. How Many Training Programs?

- My (JLN) current best estimate is that we need to train approx. 10 times the number of PHPs (from about 200 per year to about 2000)
- Current GPM/PH and CDC-based training programs, with sufficient funding, can probably triple their current output
- Further expansion will probably require creation of additional training programs
 - Modeled after current programs
 - Emphasis on the "Teaching Health Department" concept.

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3b. "How Many" ctd.

- For "Phase 1," I (JLN) recommend
 - an expansion (to 173%) to meet half of the estimated need of state and local health departments,
 - concurrent research to tweak the estimates and deal with multiple ancillary issues.

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4a. Funding – How Much per Trainee?

- 3 year training program past med school
 - Clinical year
 - MPH year
 - Practicum year
- Figure an average of \$100,000 per year per trainee for MPH and Practicum years (fund clinical year training from clinical sources of funding)

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4b. Funding – How Much Nationwide?

- Phase 1 – (per JLN issues paper)
 - First 3 years – increase enough to meet 50% of unmet State/Local HD need – 135 additional trainees per year (to 173% of current GPM/PH capacity).
 - \$27million for training programs
 - \$3 million per year for research to refine estimates, etc, etc
- Phase 2 (new)
 - Next 3 years – expand current programs to about triple their current capacity
- Phase 3 (new)
 - Subsequent 3 to 6 years – double to triple training capacity again through creation of new training programs

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4c. Funding – Source(s) of Funds

- Private foundations can provide some seed and pilot money
- Much, if not most, of the money will have to come from the federal government – directly, and/or through healthcare delivery revenue streams
- (Funding for all health-related training programs now in "crisis" per COGME)
 - Fundamental "rethinking" required
 - New models required

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JLN Papers in Agenda Package

- Editorial on technical sophistication of public health leadership
- PHP training- infrastructure needs, training needs, barriers and proposed transition plan
- Review of current public health workforce literature

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Occupational Settings for Public Health Physicians

- **Local health departments**
- **State health departments**
 - Civilian federal agencies
 - Uniformed federal agencies
 - US contribution to international PH services
- **Healthcare delivery**
- **Academia**
- Occupational Medicine
- (many other -estimated total = 10% of those selected above)

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Current Model Training Programs

- Policy/Management
 - GPM/PH residency + board certification
- Epidemiology
 - Epidemic Intelligence Service (EIS)
 - GPM/PH residency + board certification
- Clinical
 - Clinical residency by specialty

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Critical Elements of Physician Training Programs

- Didactic/classroom/book training
- **Experience under the supervision of skilled mentorship**
- -- Experience is most critical for skills where didactics do not provide a "feel" for how to use these skills in real-life situations.

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The MPH

- MPH = an introduction to public health science
- MPH alone lacks both in-depth coverage and mentorship
- **MPH alone can do more harm than good**
- ASPH proposal for "community experience" helpful, but inadequate for policy and leadership roles
- Key to success =
 - MPH
 - + more in-depth training
 - + experience under skilled mentor(s)

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A Root Cause of Disarray

- Lack of technical sophistication of top-level local and state PH leadership
- Decisions often made on basis of politics, lay perception, budget or community perception without evidence-based projection of the likely health impact on community
 - Medicaid "Community-Care"

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Root Cause of Disarray – Current Perception of Physician Role(s)

- (per Libbey, 6/19/06 IOM Presentation)
- Uniquely MD = clinical
 - Write orders
 - Oversee quality
- Partially Unique Benefit from MD
 - Improve practice standards
 - Partner with med schools
 - Keep up with med literature
- Not Uniquely MD
 - Community health assessment, epi and biostat
 - Supervise non-MDs
 - Health promotion
 - Cultural sensitivity
 - Leadership and management
- **No perception of PHP**

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GPM/PH Perspective - 1

- Specialized GPM/PH training (Med+Epi+Leadership) creates a **skill set that cannot be duplicated by the combination of an administrator + a clinician with an MPH**
- This skill set that can perceive problems not otherwise detectable and pursue solutions not otherwise achievable.
- Engaging GPM/PH physicians as local and state health directors, will, more than any other single step, upgrade the performance of our entire public health infrastructure.

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GPM/PH Perspective -2

- The community itself, is the “patient;” a living organism with anatomy, physiology, risk factors and illnesses, each of which can be addressed with preventive and therapeutic interventions.

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GPM/PH Perspective -3

- Community diagnosis involves observation, communication, epidemiologic and environmental analyses.
- Community intervention involves communication, administrative and policy/political action.

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Examples – Positive and Negative

- Model Cities Immunization
- Love Canal
- Tobacco Control in Monroe County
- Laura Kahn’s Examples (Health Affairs, 2003)
 - Smallpox in New York City, 1947
 - Cryptosporidium in Milwaukee, 1993
- Infant Mortality in Louisiana

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Implications of non-recognition of Public Health as Medical Specialty

- No need to train PH physicians – if the only unique services physicians can offer are purely clinical
- No marketplace demand for PHPs for policy/management/leadership roles
- No recognition of this root cause of disarray in public health infrastructure

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Implications ctd.

- Clinical physicians and non-physician administrators may not know enough to recognize problems, know what questions to ask, or how to ask them – to get to the root of the problem
 - Cryptosporidium in Milwaukee, 1993
 - Louisiana Infant Mortality
 - Community resilience and Katrina

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The Current PH Workforce Literature Does Not Address

- Professional qualifications of agency director and management team as determinant of agency performance (local and state health departments)
- Needs for PHP staffing by physician role
- Performance in leadership roles by level and type of training
- Reasons for rapid turn-over of local and state health directors
- Barriers to recruitment of optimally qualified staff
- Steps to be taken to improve this situation

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Proposed Approach to Estimating Needs for PHP Staffing

- Develop empirical formula for model local and state health departments and other occupational settings within PH infrastructure
- Studies to refine estimates as we implement Phase 1
- Adjust estimates based on experience and research findings

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Formula – Local Health Department FTEs PHPs/population

- Policy/Management
 - PHP #1 - 1st 200,000
 - PHP #2 - next 300,000
 - PHP #3 - next 500,000
 - Then – 1 per 1,000,000
- Senior Medical Epidemiologists
 - 1st 200,000 – none, or part time
 - PHP #1 - 200,000 to 1,000,000
 - Then – 1 per 1,000,000
 - (numbers partially reduced if policy/management physicians can cover)

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Formula – State Health Department FTEs PHPs/population Slide 1 of 2

- Even smallest state health department should have at least 2 PHPs to cover four roles:
 - Director (or policy advisor to non-physician director)
 - Deputy
 - Epidemiologist
 - Medical director
- Small state HDs serving as local HDs should be staffed as local HDs, with minimum as noted above

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Formula – State Health Department FTEs PHPs/population Slide 2 of 2

- Policy/Management
 - For cities >1m popn. – 1 PHP per 2m
 - For smaller cities and rural areas – 1 PHP per 500,000
- Epidemiology
 - 1 FTE per 1,000,000
 - (numbers partially reduced if policy/management physicians can cover)

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Formula – Healthcare Delivery (civilian, non-academic)

- Policy/Management
 - 1FTE per 1,000,000 covered lives
- Epidemiology
 - 1FTE per 1,000,000 covered lives
- Two to four PHPs per FTE, anticipating 50% to 75% clinical practice
- 1 PHP per FQHC and similar community-oriented healthcare system

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Formula – Academia

- Medical Schools
 - (Healthcare delivery staffing)
 - + 4 FTE per medical school
 - Each FTE filled by 2 PHPs
 - = 8 PHP per medical school
- Schools of Public Health
 - 2 Policy/Management
 - 2 Epidemiology
 - (all full time PHP roles)

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National Summary of Estimated Job Slots (MDs to be trained, not FTEs)

Employment Setting	Leadership	Epi	Total
Local Public Health	1,320	360	1,680
State Public Health	240	180	420
Healthcare Delivery (civilian, non-academic, non-special population)	600	600	1,200
FQHCs and similar community-oriented healthcare programs	1,000	1,000	2,000
Medical Schools	500	500	1,000
Schools of Public Health	76	76	152
GPM/PH public-health oriented residency-training programs	60	60	120
Totals	3,796	2,776	6,572
Rounded totals	3,800	2,800	6,600

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Summary of Job Slots Filled by Fully Qualified PHPs

Employment Setting	Leadership		Epi		Total	
	Slots	Filled	Slots	Filled	Slots	Filled
	#	%	#	%	#	%
Local Public Health	1320	81 6.1%	360	52 14.6%	1680	133 7.9%
State Public Health	240	106 44.3%	180	156 86.4%	420	262 62.4%
Healthcare	1600	632 39.5%	1600	369 23.1%	3200	1001 31.3%
Academia	640	483 75.5%	640	312 48.8%	1280	795 62.1%
Rounded Totals	3800	1302 34.3%	2800	889 32.0%	6600	2191 33.3%

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Capacity/Output of Current PHP Training Programs

	Physician Output	To State Local Pub H	To Healthcare + Academia
GPM/PH residencies	183	30	120
EIS	35 (American)	10	10
Totals	218	40	130

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Formula for Estimating Annual Needs for New PHPs

- 10% of all job slots – both filled and unfilled
- Re filled jobs – turn over once every ten years on average
- Re vacant jobs – fill all over 10 year period without overbuilding training system

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Formula for Training Capacity to Meet Need

- ❑ Start with number needed
- ❑ Divide by 0.8 to project 20% of graduates will seek jobs outside employment settings of interest to us
- ❑ Divide by 0.8 again to accommodate "overstaffing" of some agencies

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Training Capacity Needed to Fully Meet Need (in selected employment settings)

	Raw	Adjusted
State/Local Public Health	210	328
Healthcare + Academia	450	703
Totals	660	1,031

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Estimated Costs Per Residency Slot

- ❑ Salary \$40,000 to \$50,000 for MPH and Practicum Years
- ❑ Total costs for both years, including overhead, travel, etc and faculty = \$200,000 per resident
- ❑ (presume clinical year costs picked up elsewhere)

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Recommendations re Funding Needed

- ❑ Phase 1 – first 3 years
 - 50% of estimated unmet need (135 slots) of State/Local Public Health Need = \$27 million
 - \$3 million for outreach, curriculum development/standardization, research and other related work
 - Total Phase 1 = \$30 million
- ❑ Phase 2 – next 3 years (after need precisely measured)
 - Triple training capacity of current GPM/PH programs
- ❑ Phase 3 – next 3 to 6 years
 - Another doubling or tripling of training capacity, mainly through creation of new training programs

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Conclusions

- ❑ 1. **Lack of technical sophistication of current public health leadership, especially in local and state health departments is root cause of disarray**
- ❑ 2. Evidence of disarray is presented in prior IOM reports and shown by rapid turnover of agency heads, especially in state health departments
- ❑ 3. Upgrading professional qualifications will require **outreach to and education of hiring authorities**

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Conclusions ctd.

- ❑ 4. Transition feasible over 3-12 year period
- ❑ 5. Costs justifiable
- ❑ 6. Costs ?? feasible
- ❑ 7. Research agenda both clear and feasible
- ❑ 8. This paper has identified parameters to be measured in research on need and capacity

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