WORKING PAPER – October 1, 2005
CIRCULATE ONLY WITH MOHLTC PERMISSION

ONTARIO's MEDICAL OFFICER OF HEALTH (MOH) WORKFORCE
Results of an Empirical Investigation

INTRODUCTION

In the context of the capacity review (CRC) and public health reform currently underway in Ontario, much discussion and debate about the roles, training and supply of physicians to fill the role of Medical Officer of Health (MOH) and Associate Medical Officer of Health (AMOH) positions in local public units (HU) has occurred.

This paper reports on research commissioned by the Strategic Planning and Implementation Branch (SPIB) of the Public Health Division (PHD) of the Ministry of Health and Long-Term Care (MOHLTC). The report is conceptually divided into two sections. Section I reports analysis of the training and certification of physicians who have filled the MOH role over the period 1985-2005. Section II reports results of follow-up of those physicians who completed residency training in community medicine (CM) in Ontario over the same period, 1985-2005. Before turning to this material, the next section briefly summarizes the sections of the *Health Protection and Promotion Act* (HPPA) pertaining to the qualifications and appointment of MOHs.

HPPA: Qualifications & Appointment of MOH

Section 64 of the HPPA reads as follows:

> 64. No person is eligible for appointment as a medical officer of health or an associate medical officer of health unless,
>
> (a) he or she is a physician;
>
> (b) he or she possesses the qualifications and requirements prescribed by the regulations for the position; and
>
> (c) the Minister approves the proposed appointment. R.S.O. 1990, c. H.7, s. 64.

Regulation 566, provides specific detail as referred to in 64(b) above, and reads as follows:

> 1. (1) The requirements for employment as a medical officer of health or an associate medical officer of health in addition to those set out in section 64 of the Act are that the person be the holder of,
>
> (a) a fellowship in community medicine from The Royal College of Physicians and Surgeons of Canada;

(b) a certificate, diploma or degree from a university in Canada that is granted after not less than one academic year of full time post graduate studies or its equivalent in public health comprising,

(i) epidemiology,

(ii) quantitative methods,

(iii) management and administration, and

(iv) disease prevention and health promotion; or

(c) a qualification from a university outside Canada that is considered by the Minister to be equivalent to the qualifications set out in clause (b). R.R.O. 1990, Reg. 566, s. 1 (1).

(2) Subsection (1) does not apply to a medical officer of health or associate medical officer of health who was employed by a board of health on the 1st day of July, 1984. R.R.O. 1990, Reg. 566, s. 1 (2).

In addition, the HPPA makes provision for an Acting MOH to be appointed by a Board of Health under certain conditions, described in Section 69 as follows:

Acting M.O.H.

69. (1) Where,

(a) the office of medical officer of health of a board of health is vacant or the medical officer of health is absent or unable to act; and

(b) there is no associate medical officer of health of the board or the associate medical officer of health of the board is also absent or unable to act,

the board of health shall appoint forthwith a physician as acting medical officer of health. R.S.O. 1990, c. H.7, s. 69 (1).

Powers and duties

(2) An acting medical officer of health of a board of health shall perform the duties and has authority to exercise the powers of the medical officer of health of the board. R.S.O. 1990, c. H.7, s. 69 (2).

Thus, at the present time, there are five potential pathways by which Ontario's 36 MOHs may be deemed qualified for their positions:

1. Employment prior to July 1, 1984. The legislation is silent on the mobility of persons who may have been employed by a Board of Health prior to this date and are considered for employment by a different BOH after July 1, 1984

2. Persons holding fellowship in community medicine conferred by the Royal College of Physicians and Surgeons of Canada

3. Persons who have completed graduate training in Canada as described in Section 1(b) of Regulation 566

4. Persons with training from outside Canada deemed equivalent to that described in Section 1(b) of Regulation 566

5. Persons appointed as Acting Medical Officers of Health, which would appear to require only licensure for independent practice in Ontario

Across Ontario's 36 Boards of Health, there are currently 17 MOHs who have fellowship training in community medicine, and 9 who are acting MOHs. Of the remaining 10, it is not possible to distribute them accurately among groups 1, 3, and 4 in the list above.

SECTION I: WHO DOES MOH WORK IN ONTARIO?

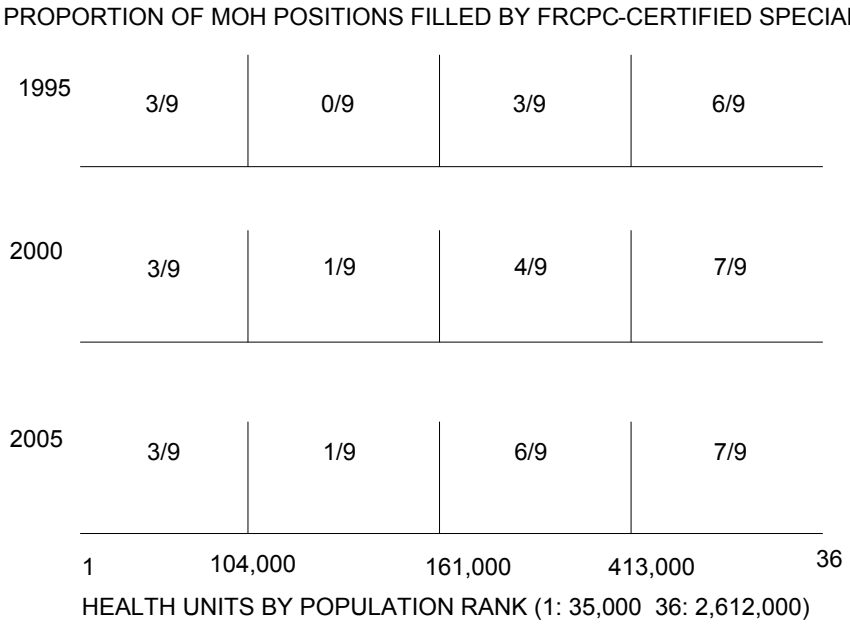
For the purposes of this report, all 36 BOH in existence as of July 1, 2005 were contacted by email and telephone on multiple occasions. All were asked to provide a list of the names of physicians who had been employed as MOHs (and Associate MOHs if applicable) together with the dates of their appointment. Many struggled to gather the relevant information, citing off-site record storage or corporate reorganizations that had led to record disposal.

Given some missing data, and the decision to forego contacting individual MOHs to request confirmation of their credentials, physicians working or who had worked as MOHs were classified as FRCPC-certified CM specialists if i) they were listed in the online version of the Fellows Directory of the Royal College of Physicians and Surgeons of Canada (RCPSC), or ii) their public record of licensure with the College of Physicians and Surgeons of Ontario (CPSO) listed a specialist qualification in Community Medicine. An additional 14 physicians whose record listed a specialist qualification in Public Health were also checked.

Using population numbers provided by the MOHLTC,[1] BOH were ordered into quartiles (each comprising 9 HU) and the proportion of FRCPC-qualified MOHs calculated for each of 1995, 2000, and 2005. If the HU are split into two groups: 18 HU with

[1] The population numbers are drawn from a file prepared prior to the official dissolution of the Muskoka-Parry Sound Board of Health and the resulting increase in the populations of the Simcoe-Muskoka and North Bay-Parry Sound Boards of Health. This omission does not, however, change the relative positions of the two successor BOHs within the quartiles by population used for analysis.

populations below 161,000 and 18 HU with population greater than 161,000, the emerging pattern is striking. As the figure illustrates, only 4 of 18 smaller HU have an FRCPC-certified CM specialist as MOH while 13 of the larger 18 have an MOH so-qualified.



The figure highlights the degree to which FRCPC-certified CM specialists are clustered in larger HU. A threshold population of roughly 200,000 would seem to predict employment of an MOH who is both qualified under the HPPA and FRCPC-certified in Community Medicine. Conversely, all 9 Acting MOH are working in smaller HU, ranging in population from 35,000 to 161,000.[2]

In an effort to examine turnover and mobility, data from 1995, 2000 and 2005 were compared. These data suggest virtually no change over the last decade in terms of the proportion of BOHs employing an FRCPC-certified CM physician as an MOH. Because there is no central registry of persons employed as MOHs or Acting MOHs, it is not possible to complete the same analysis for the HU noted to have Acting MOHs in 2005.

Comparing 1995 to 2000, a net gain of 3 from 11 to 14 occurred and this was repeated between 2000 and 2005, rising from 14 to 17. Almost all of this increase (5 of the 6 total increase) occurred in HU with larger than median populations. Furthermore, as of September, 2005, Thunder Bay is searching for a new MOH, temporarily returning the FRCPC count to 3 for the smaller HUs.

[2] The largest HU of this group, Hastings-Prince Edward, has announced the employment of an FRCPC-certified Community Medicine physician effective September, 2005. When that appointment is confirmed, the 8 remaining HU with Acting MOHs will have populations ranging from 35,000 to 132,000.

Perhaps more striking over the last decade is the degree to which people have remained in the same positions. Of those employed as MOH with FRCPC certification in 1995 (11 CM and one pediatrics), 10 of 12 were in the same positions with the same organizations in 2000 and that held through 2005. Put another way, of the 17 FRCPC-certified MOHs in 2005, their average duration in their current positions was approximately 8 years.

Associate Medical Officers of Health: Developing Future MOHs?

Larger HU (by population) typically have one or more Associate Medical Officers of Health (AMOH). In 2005, AMOH are currently employed by all but one (Windsor) of the 12 HU with population greater than 400,000. Windsor is reportedly seeking to recruit an AMOH. In addition, two smaller HU with local academic affiliations (Sudbury and Kingston) have or are recruiting for AMOHs.

Over the period 1985-2005, a minimum of 33 physicians have been or are employed as AMOHs. Of this group, 29 are FRCPC-certified. While the rate of transition from AMOH to MOH will be a function of many factors, what is notable about this group of physicians that is that only three of the 27 have moved from AMOH to MOH role. The larger number (3) moving from AMOH positions with one HU to AMOH positions with another HU or to positions with the federal government (3) suggests that the career paths of FRCPC-certified CM specialists who are AMOH are more likely to lead out of local public health than to roles as MOHs.
Taken together, these results suggest several persisting themes:

- Larger health units, particularly those with populations above approximately 200,000, are able to recruit and retain FRCPC-certified CM specialists fairly consistently.

- Acting MOHs are clustered in HU with small, dispersed populations, notably in Southwestern and Northeastern Ontario.

- The duration of tenure of MOHs is relatively long in any particular organization. This may be due to the preferences of these individuals but also likely reflects the absence of a career path for MOHs. In this regard, although MOHs are employees or organizations within a public health system, their labour mobility appears much more like other physicians than like CEOs of other health system organizations such as hospitals or long term care facilities.

- Across the province as a whole, AMOH positions, are more likely to be filled by FRCPC-certified CM specialists than are MOH positions. This is due in large part to the clustering of AMOH positions in larger HU – namely those HU whose MOH is most likely to be an FRCPC-certified CM specialist. Despite this concentration of certified specialists in AMOH positions, transition from an AMOH role to an MOH role is a relatively rare event. In two of three situations

where this occurred, the person hired as an MOH was an AMOH with the same organization immediately prior to being hired as the MOH.

SECTION II: WHERE DO ONTARIO's FRCPC-CERTIFIED PHYSICIANS GO?

Ontario's Academic Health Sciences Centres (AHSC) provide publicly-funded postgraduate medical training. Over the period covered by this work, three residency programs in Community Medicine have existed, located at the Universities of Ottawa and Toronto and McMaster University. The program in Ottawa was wound up in 1998, with its last intake of residents in 1995 transferred to the Toronto program.

These programs vary in size and emphasis, reflecting the wide latitude accorded to the AHSC universities in determining the allocation of training positions among disciplines and the allocation of infrastructural resources to each training program. In addition, as community medicine residency program directors have noted, the employment of MOHs by HU means that there is no financial benefit to the universities or AHSC hospitals from postgraduate trainees in community medicine such as that flowing from the work done by residents in internal medicine or general surgery. In these hospital-based disciplines, work done by residents is billed to OHIP and funds from that work flow into departments that supervise the training of residents. By contrast, CM programs have had to rely largely on the goodwill and volunteerism of MOHs to ensure training opportunities for their residents. Furthermore, while an internist 'earns money for sleeping' when his/her team is on call and s/he is relaxing at home, the MOH supervising a resident provides uncompensated time to do so and, except in cases of residents filling budget-gapped positions, with no financial benefit to the HU.

The three programs differ quite markedly in size. The table below shows the number of persons identified as completing residency training in each of the three programs, together with the yield for local public health, defined as the proportion ever working in an AMOH or MOH role, and the current yield, defined as the proportion currently working in AMOH or MOH positions.

	TORONTO	McMASTER	OTTAWA
TOTAL	64	13	23
EVER WORKED AS A/MOH	35	5	1
CURRENTLY WORKING AS A/MOH	23	5	0

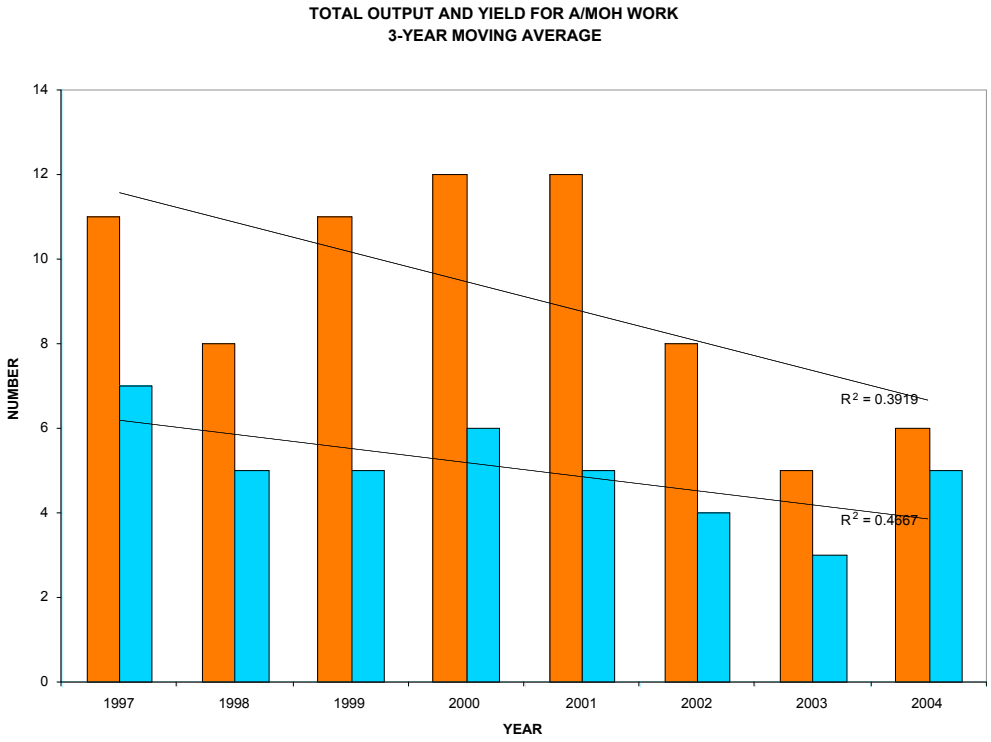
These data highlight significant differences among the programs. Over the period 1985-1998, the Ottawa program produced 23 certified specialists, of whom only one ever worked in a local public health role in Ontario. That person left the province in 1998 following municipal amalgamation in Toronto.

The McMaster program has been the smallest of the three, producing 13 certified specialists over the 20 years under consideration here and the program appears to have had two distinct phases. Phase one (1985-1997) produced 9 specialists of whom only 2 were ever employed as AMOH or MOHs in Ontario. Over the period 1998-2001, no residents completed the program. Phase two (2002-2005) has been marked by an increase in the number of residents completing FRCPC certification (4) and a dramatically higher yield as 3 (75%) have ever worked in local public health in Ontario and, as of November, 2005, all three of these will be employed as AMOH in Ontario.

Toronto's program in community medicine is not only the largest in Ontario but the largest in Canada, producing 64 trainees over the period 1985-2005. Two of these 64 completed the residency training but not certification by the RCPSC. As one of these two is currently employed as an MOH, these two have been counted as completing training for the purpose of this analysis. Over the 20 year period, Toronto's yield in terms of ever worked as MOH or AMOH has been 55%. Broken out by five-year intervals, however, the data indicate that the yield has risen consistently to a level of 69% for the period 2000-2005.

Given the numbers of certified specialists from the Toronto program, it is also possible to look at the trend in proportion of FRCPC specialists currently working as MOH or AMOH in Ontario. Earlier intervals would be expected to have lower 'current working' yields as people move to other roles and the data support this as 'current working' yield rises from 45% in the period 1985-1990 to 78% for the last decade. Taken together, the yield calculations suggest that if an FRCPC-certified CM specialist becomes an MOH or AMOH, there is a high probability that s/he will continue to be employed within a HU in one of these roles.

Anecdotal concerns expressed by some public health officials regarding the declining proportion of persons who complete CM training and work as AMOH or MOH are not borne out by the data. The figure below, using a 3-year moving average (i.e. the yield for $year_i$ is calculated using data from $years_{i-1,i,i+1}$, suggests that the yield has remained relatively constant, while the number of residents completing training has been on a downward trend. Although the trend is downward in recent years, this does not reach statistical significance using linear regression, likely due to the paucity of data.



WHAT DO RECENT FRCPC-CERTIFIED CM SPECIALISTS WANT?

In an effort to gather additional information about the attitudes and preferences of recent FRCPC-certified specialists in community medicine, brief interviews were held with 9 of 16 people who completed training between 2000 and 2005. The questions used to structure the interview are included in Appendix I.

In terms of intent to work as an MOH or AMOH, all but two reported a significant increase in their intention between commencing and completing residency training. Of the two whose intention did not swing that way, one described a previously unfound interest in policy work (but worked as an AMOH for 3 years and now provides clinical services in clinics run by a health unit) and the other has pursued a combination of research and clinical practice while completing PhD studies.

All respondents whose intentions shifted towards local public health work described positive experiences while on rotations in HU. Particular mention of mentors or personal connection to an MOH or AMOH as critical to their decision was identified by more than half of respondents.

In ranking factors important to employment choices, several common themes emerged. Only one respondent noted that the CEO role was both important and desirable. More common was the comment that it was important to avoid this role and its attendant managerial tasks to make local public health work attractive. On the matter of compensation, respondents typically noted that CM specialists are underpaid relative to

other FRCPC-certified specialists employed by governments (e.g. provincial hospital psychiatrists) and to other physicians. More than half identified uncompensated and relatively high frequency (as much as 1 week in 2) on-call responsibilities as a more important issue requiring attention. Several noted that compensated on-call duties would be a way to apply systems in use for specialists providing on-call coverage to hospitals to public health practice. Finally, there was uniform agreement that links to professional peers, particularly other CM specialists was extremely important.

All respondents concurred with the oft-noted shortage of trained physicians to work in public health in Ontario and all felt that the option of permitting any licensed physician to work as an MOH was not an effective solution. Three other options proposed were supported by all respondents: mid-career re-entry opportunities, alternatives to FRCPC training with the proviso that this include some management development and field experience in a health unit setting, and incentivized re-entry. This last option was proposed in light of the significant income drop if a physician in practice returns to residency training and is paid only according to the PAIRO scale and would be similar to contracts offered by North Bay Psychiatric Hospital that have topped-up trainees income while in residency in return for a commitment to work at the facility upon completion.

All but one respondent agreed that group practice is as or more important to CM specialists as other physicians. Several noted that regionalized MOH services or a smaller number of larger population-base HU would facilitate a critical mass of physicians working together. When mentioned, a group size of 3 emerged as the minimum desirable number, enabling as one person phrased it, ‘space to figure out how to get along’.

Almost all respondents agreed that harmonization would be desirable and equitable, so long, as several noted, that it was harmonization upwards and not to the lowest salary level. OMA representation occasioned no ill-will with most respondents concurring with the sentiment that it would be better than the current absence of representation. One respondent suggested that funding AMOH and MOH compensation from a central budget would facilitate harmonization and free local Boards of Health from an incentive to leave MOH positions unfilled.

As with any qualitative process, the richest material was gathered from respondents general comments about their work situations, career plans, and aspirations for public health. More than half identified the importance of maintaining some clinical (i.e. patient care) role and several noted that this was non-negotiable and could be the sticking point against staying in an AMOH role, particularly as other developmental tasks become important (e.g. family life, parenting). One commented that clinical work is important for variety, ‘to feel like a doctor’ and to generate income – AMOH work takes up 65% of my time and generates 40% of my income and working in the ER 35% of my time brings in 60%. One respondent who left Ontario noted that a Western Canada opportunity in a regional health authority structure which includes public health offered 50% more income and a subject matter focus on chronic disease unavailable in Ontario. Several responses highlighted the workplace culture of public health, noting that clinical work also provided relief from the low morale and culture of complaining that is noted in

public health work, and that retention would be easier if MOHs were more competent and collegial – more mentoring and less treating recently certified specialists like residents.

Finally, a group of comments highlighted the lack of career path. Specific mention was made of the 'lost years' at the Public Health Branch (now PHD), coupled with exceptionally low compensation and inflexibility in the terms of Ontario Public Service employment as making that work unattractive and in recent years, unavailable. Flexibility, including part-time opportunities, was generally deemed more desirable than simply paying more money for the limited opportunities currently available.

CONCLUSIONS

- Ontario's 36 HU range in population size from 35,000 to 2.6 million. HU with smaller populations are much more likely to have Acting MOHs. A threshold population of approximately 400,000 (excepting location near an AHSC) appears to facilitate a critical mass of FRCPC-certified CM specialists in a HU.

- Roughly 90% of Associate MOH positions are filled by FRCPC-certified CM specialists. Few (10%) move to MOH positions. It is not clear whether this is due to the absence of a career path within local HU or features of MOH work deemed undesirable by persons employed as AMOH.

- Ontario's 3 residency programs in Community Medicine have produced 100 specialists over the period 1985-2005. Only 1 of 23 specialists from Ottawa's program has ever worked in local public health. McMaster's program produced only 2 people working as AMOH or MOH over the period 1985 through 1997, but in recent years (2002-2005), 3 of 4 specialists trained at McMaster have opted for AMOH roles.

- The largest program, in Toronto, has produced an increasing yield of specialists over the period 1985-2005, rising from 45% in 1985-1990 to 69% in 2000-2005. Nevertheless, even if all CM graduates were to work as AMOH or MOH, currently unfilled positions and succession requirements alone would consume all graduates until well into the next decade.

- Interviews with recent FRCPC-certified CM specialists working as AMOH highlighted the desirability of part-time work that permits some clinical activity, the relative undesirability of much of the management role associated with the MOH position as currently conceived in many HU, and the need for efforts to facilitate peer interaction and career development. These sentiments parallel developments in many other fields and, if implemented in future public health organizations in Ontario would appear essential to addressing recruitment and retention of FRCPC-certified CM specialists as Medical Officers of Health.