Are public health physicians fading out of management?

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Background: Recent developments in health services in the local arena in Norway have challenged the theoretical and applied scientific basis for both public health medicine and management. During the 1990s although public health physicians in Norway increased in number, they worked less with public health, as well as public health management. The effects of these developments on public health management are largely unknown. We studied public health physicians’ involvement in management and their self-reported managerial competence. Methods: Cross-sectional study of physicians working in local public health medicine in all Norwegian municipalities, using a mail-back questionnaire. Results: Public health physicians reduced their administrative tasks and evaluated their own managerial competence rather conservatively and somewhat lower in 1999 than in 1994. Many had supplementary training in management in addition to their medical education and specialty training. Conclusions: Public health physicians may be fading out of management. To address this there is a need for development of both public health management training programmes and provision of adequate resources for managerial activities.

Keywords: management, managerial skill, physicians, public health, self-evaluation

The relationship between public health medicine and management can be described as ambivalent, despite their mutual dependency.¹,² Recent developments in Norwegian health care challenge public health, as well as medicine in general.²⁻⁷ Reforms for decentralization of health care have increased the complexity and responsibilities of primary health services.⁸⁻¹⁰ The new focus on market-modelled financing and remuneration, on individualization and on patients’ rights, call for changes in organization and new ways of dealing with both professionals and users of health services.

The effects on public health management are largely unknown. In an earlier article we have shown a decrease in overall public health work and specifically in management work for public health physicians. Here we present and discuss further data on public health physicians’ involvement in management and their formal and self-reported managerial competence.

Material and methods

We performed cross-sectional studies of physicians in local public health medicine in all Norwegian municipalities in 1994 (N = 505) and 1999 (N = 555), response rates 66% and 70%. Head public health physicians, their deputies and physicians working with communicable disease control were asked to estimate the time spent on management, administrative span (number of services or departments managed) and their managerial competence. The questionnaire, participants and supplementary data are described elsewhere.¹¹ To estimate time used on managerial tasks we used self-reported time. To assess managerial competence we used a survey instrument of 17 statements about different managerial tasks (box 1).

Statistics

Statistical analyses were performed using the statistical software SPSS (release 11.0.0, Copyright © SPSS Inc. 1989–2001). Differences between groups were tested by t statistics for continuous variables; otherwise χ² statistics were used.

The managerial competence survey instrument used response alternatives on a 5-point Likert scale, where the extreme response alternatives were specified as ‘Master very well’ and ‘Master very poorly’. Using factor analysis we identified four clusters of related items. For each cluster we constructed an additive index.

Box 1 Statements regarding managerial competence

- Solve interpersonal problems and conflicts.
- Be a unifying symbol, motivate, inspire and stimulate enthusiasm.
- Give guidance to subordinates, stimulate professional development.
- Stimulate cooperation between different departments.
- Be informed about viewpoints of patients and patients groups.
- Ensure that regulations and routines are complied with.
- Plan the daily working routines.
- See to it that new employees are given instructions and training.
- Ensure professional standards of activities.
- Manage economy accounts and budget.
- Keep yourself informed of political signals.
- Incorporate political signals in the services.
- Develop and implement new routines and working methods.
- Take initiatives in relation to new professional possibilities.
- Keep subordinates informed about goals and plans.
- Solve problems by changing the organization.
- Coordinate different kinds of activities.
Results

The number of positions for public health physicians increased from 510 in 1994 to 575 in 1999.

Weekly hours in management work

In an earlier article we have shown that although the number of physicians working in public health increased by 10% an estimation of the total weekly hours done decreased by 3.7% from 1994 to 1999 depending on remuneration model, specialty in community medicine and municipality size. Time spent on management tasks was reduced with 1.6 h per week (16%, \(P = 0.02\)), but still 8.3 h per week were used for management.

For the minority (\(\sim 10\%\)) of public health physicians not working in clinical medicine there were no significant changes in the relative distribution of different tasks.

In 1994, 26 (8%) and in 1999, 69 (18%) of the responders reported using no time for management and no administrative span. When these were excluded, the reduction from 1994 to 1999 was no longer significant.

Administrative span

The proportion of public health physicians having managerial line responsibility was 95% in 1994 and 86% in 1999 (\(P < 0.001\)). On average the administrative span in 1994 was 4.6 services, in 1999 3.9 (\(P < 0.001\)) (maximum range 11).

During both periods \(\sim 70\%\) of all were managerially responsible for four or more services, most commonly general practice, environmental health, physiotherapy and public health nurses. There was a reduction from 1994 to 1999 in the proportion having personnel and budget responsibility for all but two services, most marked for environmental health (9%) (table 1).

Managerial training

In 1994, 58% and in 1999, 55% had one or more types of postgraduate managerial training (\(P = 0.66\)).

Self-reported managerial competence

The four clusters of variables identified by factor analysis were named integrating, producing, entrepreneurial and administrating factor, corresponding to Adizes’ theory of managerial roles.

There was a statistically significant reduction from 1994 to 1999 in the average scores on two of the four factors. The reduction was most pronounced for the producing role and rather small (table 2).

Discussion

Weekly hours in management work

By law each municipality must appoint a head public health physician. The responsibilities of the obligatory position are at the discretion of the municipalities and the public health physicians. During the 1990s a decreasing proportion of public health physicians had managerial responsibility, still between one-fourth and one-fifth of working hours were spent in management.

The reductions may reflect a tendency to redefine the public health physicians’ authority from executive to advisory. Transferring executive authority to other health professionals or managers trained in law or business administration may have

Table 1 Administrative span: proportion of public health physicians having managerial line responsibility for different services and departments. Proportions of physicians with no administrative span and no working hours in management in italic. Percentage in 1994 and 1999, with significance level for difference are shown

<table>
<thead>
<tr>
<th>Service</th>
<th>1994 (N = 325)</th>
<th>1999 (N = 336)</th>
<th>Significance level P</th>
</tr>
</thead>
<tbody>
<tr>
<td>General practice</td>
<td>92 (93)</td>
<td>96 (94)</td>
<td>0.79</td>
</tr>
<tr>
<td>Environmental health</td>
<td>83 (74)</td>
<td>85 (75)</td>
<td>0.002</td>
</tr>
<tr>
<td>Physiotherapy</td>
<td>67 (60)</td>
<td>70 (63)</td>
<td>0.11</td>
</tr>
<tr>
<td>Public health nurses</td>
<td>66 (58)</td>
<td>69 (61)</td>
<td>0.05</td>
</tr>
<tr>
<td>Midwives</td>
<td>43 (55)</td>
<td>45 (57)</td>
<td>0.002</td>
</tr>
<tr>
<td>Department of health prevention</td>
<td>39 (34)</td>
<td>39 (34)</td>
<td>0.20</td>
</tr>
<tr>
<td>Food control</td>
<td>27 (25)</td>
<td>28 (26)</td>
<td>0.51</td>
</tr>
<tr>
<td>Occupational therapists</td>
<td>26 (28)</td>
<td>27 (29)</td>
<td>0.44</td>
</tr>
<tr>
<td>Occupational health</td>
<td>12 (6)</td>
<td>12 (6)</td>
<td>0.007</td>
</tr>
<tr>
<td>Home based services (for the elderly and handicapped)</td>
<td>4 (3)</td>
<td>4 (3)</td>
<td>0.36</td>
</tr>
<tr>
<td>Other(^a)</td>
<td>9 (18)</td>
<td>9 (18)</td>
<td>0.005</td>
</tr>
</tbody>
</table>

\(a\): For example, home based psychiatric services and casualty department

Table 2 Additive index scores for self-perceived managerial competence. Physicians with no administrative span and no working hours in management excluded. Means 1994 and 1999, with significance level for difference between 1994 and 1999

<table>
<thead>
<tr>
<th>Area of competence</th>
<th>1994</th>
<th>1999</th>
<th>(P)-value for difference 1994–99</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1994 (n = 283–295^a)</td>
<td>1999 (n = 294–302^a)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>95% CI</td>
<td>Mean</td>
</tr>
<tr>
<td>Integrating (scale 0–20)</td>
<td>12.00</td>
<td>11.66–12.30</td>
<td>11.84</td>
</tr>
<tr>
<td>Producing (scale 0–20)</td>
<td>11.95</td>
<td>11.63–12.27</td>
<td>11.39</td>
</tr>
<tr>
<td>Entrepreneurial (scale 0–8)</td>
<td>4.68</td>
<td>4.49–4.86</td>
<td>4.42</td>
</tr>
<tr>
<td>Administrative (scale 0–20)</td>
<td>11.59</td>
<td>11.26–11.93</td>
<td>11.36</td>
</tr>
</tbody>
</table>

\(a\): Numbers vary due to missing answers
producing role tasks as they are components of clinical training and practice. The decrease might also reflect more secretarial assistance or new technology support. However, unpublished data from our study indicate a reduction in secretarial services from 1994 to 1999, and Norwegian local public health physicians’ access to use of internet resources is low. The population’s and the authorities’ demand for more clinical work, together with strong economic incentives, may have led physicians to give priority to clinical work at the expense of public health work, including management.

Administrative span
The increased proportion of public health physicians having no human resources management in 1999 compared to 1994 may reflect the increased number of public health physicians. The mixture of services managed changed. The majority was responsible for a core set of services: general practitioners, environmental health, physiotherapy and public health nurses. But fewer public health physicians managed environmental health in 1999 than in 1994. This service also had the highest reduction in working hours. Environmental health may have become considered an integrated part of other services, or constitute so little work that the responders did not consider it a specific management area. Both explanations give rise to just as much concern as the fact itself.

The administrative span in both the years comprised of services and departments focusing clinical medicine and individuals. This supports the notion that public health management was more health services management than actual public health management or health of populations’ management: public health lose to clinical medicine.

Managerial training and self-reported competence
Both in 1994 and 1999 a substantial and stable portion of local public health physicians had some postgraduate managerial training. Showing a drive and ability to training, the question is whether the training was adjusted for their actual challenges.

Yet, on the average our responders scored cautiously on managerial competence. This may reflect the unpleasantness of rating one’s own competence. We prefer, however, to interpret it as an indication that doctors in public health consider their managerial duties difficult, recognizing their shortcomings and conceding that their managerial performance might be improved.

The doctors scored highest on the integrating managerial role, which is on statements on guidance, motivation, cooperation and solving of conflicts. These are more familiar tasks as they are components of clinical training and practice.

Score reduction from 1994 to 1999 was most pronounced for the producing role, focusing follow-up of standards and routines in the medical as well as in the economic area. During the study period quality assurance was focused parallel to routines in the medical as well as in the economic area. During significant change, which merits attention and action.

Conclusion
Local public health physicians in Norway still perform a considerable amount of managerial work in a broad administrative span, and many have supplementary management training. Yet, they score themselves cautiously on managerial competence and they work less with public health.

Reduced their administrative span.
Evaluated their managerial competency conservatively and lower in 1999 than in 1994.
Public health training needs to be stronger on public health management.

Public health and health care require managerial expertise in public health, linked to medical knowledge and experience, also in a local context. The problem addresses both the need for development of evidence-based public health management in the training programs for health professionals and provision of adequate resources for their managerial activities. Central and local government have, however, put little effort into seeking organizational solutions, on identifying specific competencies and qualities, developing training methods and training physicians for this.

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Conflict of interest: None declared.

Key points
- Worked less in public health as well as in management.
- Reduced their administrative span.
- Evaluated their managerial competency conservatively and lower in 1999 than in 1994.
- Public health training needs to be stronger on public health management.

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