Niagara Health System: Under Threat

A study of published documents for Ontario Health Coalition

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Introduction

The proposal[1] to drive forward the controversial closure of five local hospitals in the Niagara area[2], based on an extremely limited 3-year old report from a Supervisor appointed by the Ontario government to address a c. Difficile outbreak, lacks any rational justification.

The available information from the Local Health Integration Network (LHIN) and from consultants' reports indicate that the site of the first hospital closure, Niagara-on-the-Lake, has an above average and still rapidly increasing population of older people, but inadequate facilities to care for them. According to the LHIN:

> "Niagara has the second highest number of seniors as a percent of its population, but has the second lowest number of LTC beds per 1,000 population 75+."[3]

The inadequacy of existing bed numbers is also underlined by the findings of the LHIN that

> "overall occupancy rate within the current complex care bed complement across NHS is 93.2%."[4]

By many measures this level of occupancy, which implies fairly frequent bed shortages, would be regarded as unacceptably high: certainly it would be well above the level aimed for by service planners in the British National Health Service, where a much more prudent target occupancy of 82% for acute beds and for older people (with slower turnover) has been established for some years. A 2001 study notes that:

> "In the years leading up to the bed crisis there was a widely held supposition that 85% average occupancy was the optimum for an efficient hospital and that this occupancy allowed a suitable margin for peaks and troughs in demand. Beds were then closed to meet this target.
>
> "More recent NHS guidance now suggests that no Trust [hospital] should exceed a target of 82% average occupancy …"[5]

However it appears that in HNHB LHIN at least, the current 93% occupancy is viewed as too low. Instead the closure of beds at NOTL is designed to raise bed occupancy to dizzying heights, to create a system living permanently on the edge of crisis:

> "NHS plans to increase occupancy across all complex care beds to 97% resulting in 2,463 bed days or seven bed equivalents." [4]

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[1] Smith K, 2012, *Report to the Honourable Deb Matthews Minister of Health and Long Term Care on Restructuring of the Niagara Health System*, available http://www.health.gov.on.ca/en/common/ministry/publications/reports/nhs_report/nhs_report.pdf

[2] Port Colborne, Fort Erie, Niagara Falls, Niagara on the Lake and Welland

[3] Hamilton Niagara Haldimand Brant LHIN (2012) *Final Draft Strategic Health System Plan*, December 2012:p5

[4] HNHB LHIN (2014) Briefing Note on Niagara Health System – Niagara on the Lake Site, Full Board Package December 10 2014. http://www.hnhblhin.on.ca/boardandgovernance/boardmeetings/dec102014boardmeeting.aspx

[5] Jones R (2001) Bed Occupancy – don't take it lying down. Health Service Journal 111(5752): 28-31, available http://www.hcaf.biz/Hospital%20Beds/HSJ_Beds.pdf

In partial justification for closing the Niagara-on-the-Lake beds, a review done by the Hamilton Niagara Haldimand Brant LHIN cites figures showing heavy use of the complex continuing care beds in NOTL by patients from outside the immediate catchment, primarily from St Catharines. But this would seem to point to inadequacy of local provision of health care for older people at St Catharine's rather than a surplus of beds in NOTL.[6]

To make matters even more complicated the area also has exceptionally poor transport links for seniors who are unable to drive themselves or find a ride to a more distant hospital. A consultants' report for the LHIN emphasises the lack of public transport options, describing Niagara-on-the-Lake as:

> "Predominantly auto-centric environment with a lack of public transit coverage and transportation for seniors who are unable to drive."[7]

Nonetheless the plan is to close not only the acute hospital beds serving this population, but also ***all*** of the NHS diagnostic and imaging services it offers[8]. It would seem that the inevitable consequence of this must be for the population with the greatest and most frequent health needs to be obliged to travel an increased distance to access even the most basic hospital care, while the way is cleared for for-profit diagnostic imaging and lab services" to cash in on the local needs of patients.

These unwise closures are due to begin as this report is drafted, with the closure of beds delivering complex continuing care at Niagara-on- the-Lake. So at least in the medium term the communities of the Niagara area face a reduction in local hospital care, with only a distant promise of a new hospital – much further away for many who lose their nearest hospital.

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[6] It should be noted that the decision to centralise acute care beds into West St. Catharines, Niagara Falls and Welland and to focus Niagara-on-the-Lake on providing regional complex continuing care was made by the LHIN when it approved the Niagara Health System's Hospital Improvement Plan which recommended: "The Niagara-on-the-Lake site will provide a focused role in complex continuing care and continue to provide access to primary care through its Family Health team" (page 109). In reviewing the extremely limited inpatient population numbers, the LHIN looked at the percentage of St. Catharines residents using Niagara-on-the-Lake complex continuing care beds, but did not review the number of Niagara-on-the-Lake residents who must travel to West St. Catharines or Niagara Falls to access acute care beds and other services.

[7] Lough Barnes Consulting Group (2014) Niagara-on-the-Lake Health Service Review , Final Report, August 14: (p13) http://www.notlfht.com/files/NOTL_Health_Service_Review_Final_Report_14-08-2014.pdf

[8] Lough Barnes Consulting Group (2014) Niagara-on-the-Lake Health Service Review , Final Report, August 14: (p38) http://www.notlfht.com/files/NOTL_Health_Service_Review_Final_Report_14-08-2014.pdf

The Supervisor takes over

The report setting out the closure proposals is striking for its lack of even the most rudimentary analysis of local population and communities, demographic pressures, health needs, or logistical and access issues. No equality impact assessment has been published. The promised replacement hospital in "south Niagara" is admitted to be at least six years away (and from past experience is therefore closer to ten years away, if it is ever built at all), while the closures press ahead in the short term. There has been little if any formal public consultation on these proposals, other than the Supervisor apparently randomly discussing matters with hand-picked individuals.

The "final" report outlining the closure plans was published in September 2012: it is almost unchanged from an almost identical "interim report" that had been published four months earlier[9]. By that time the author, Kevin Smith, who had been appointed to Niagara's Health System as a Supervisor by Queen's Park politicians keen to replace the Board of Directors amid a public and media outcry over an outbreak of the 'superbug' C. difficile[10], had been in post for only a few months, after taking office in the late summer of 2011.

It is most unusual for plans and proposals, which should be based on the most complete current evidence and costings, to be implemented on the basis of such limited local experience, and carried through so long after the key documents were completed, with no further update or examination of the situation and local views.

It should also be of concern that the draconian powers accorded to a "supervisor" to revamp hospital services apparently require no formal public consultation on proposals which are submitted directly to the Minister[11]. This effectively cuts out any input from local communities or from the Local Health Integration Network, and means plans can be promoted with little if any engagement with staff involved and patients most affected.

After the disbanding of the previous locally-based Board of Directors, no proper local scrutiny of the clinical or financial viability of the Supervisor's proposals took place in 2012: and since then nobody seems to have been in a position to address the glaring omissions, inconsistencies and false assumptions in these proposals.

The entire exercise has from the beginning been largely unexplained, and carried through without reference to the local communities.

When she announced her decision, the initial statements from Deb Matthews, Ontario's Minister of Health and Long-Term Care, appeared to focus on local concerns at a substantial outbreak of C. difficile. This resulted in a large number of deaths of patients at three of the six hospitals in the Niagara area:

> "I can't ignore the fact that a very large segment of the public has lost necessary confidence in this hospital's administration. As health minister, it's my job to listen to Ontarians and take the right steps. I want to keep working with the people of the Niagara region to improve the quality of patient care and ensure that the Niagara

[9] http://www.niagarahealth.on.ca/uploads/Dr-Smith-Interim-Report-Restructuring-NHS-May-2012.pdf
[10] http://www.cbc.ca/news/canada/toronto/ontario-appoints-niagara-health-supervisor-1.1099272
[11] http://www.niagarafallsreview.ca/2011/08/26/examining-the-role-of-a-hospital-supervisor

> Health System will be strong for years to come. To make sure that NHS is on the right track, I think it's important that there is a leader within the hospital system who reports directly to me."[12]

However Mr. Smith's interim and final reports as Supervisor offer no serious discussion of why he had been appointed, offering only one passing reference to hospital acquired infections (September Report, page 33).

Despite the fact that he might reasonably be expected to explain and emphasise his own role in sorting out the issue, there is no discussion of what was found to have caused the C. difficile outbreak in 2011, why the outbreak was not better contained, or what has subsequently been done to prevent such an outbreak happening again. **If his appointment really was because local people really "lost confidence" in their health care provision, it's hard to see what Smith might have done or said to win back their confidence.**

Smith already had a full-time job as CEO of St Joseph's Healthcare in Hamilton before he was appointed to take on the Supervisor role in Niagara: he remains in both posts. While an exceptional secondment of this sort for a limited period to address a specific problem might have seemed logical, Smith has gone on to accept a new, *permanent* post as CEO of the Niagara Health System, a job he created, working with a new Board he has chosen[13].

Whatever we may think of Smith's suitability and capacity to do both jobs, both St Joseph's and Niagara have each been left with only a part-time CEO. This suggests either that there is little real work to be done by such an individual – despite such a grandiose salary – or that much of the responsibility for one post or the other (or both) has been landed on subordinates, who are effectively serving behind the scenes as CEOs, unacknowledged, on a lower pay grade.

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[12] http://news.ontario.ca/mohltc/en/2011/08/ontario-intends-to-appoint-supervisor-at-niagara-health-system.html

[13] http://www.stcatharinesstandard.ca/2014/01/17/being-kevin-smith

The Supervisor's Report on Restructuring the Niagara Health System (September 2012)

The document is written throughout in a most unusual first person style, and with a near total lack of evidence or references, which serves to underline not only the fact that Kevin Smith, as Supervisor, was given extraordinary powers to act alone and without reference to any local body, but also that he has assumed his views are sufficient argument for five local communities to be deprived of their hospital facilities, even though any replacement would be at least six or more years down the road.

When he talks about "leadership" he clearly means himself, and his views are seen as the focus. In his letter to the Minister Smith describes the need for a "comprehensive, consultative and explicit strategic and tactical plan" – yet the document he has put forward clearly has none of these characteristics.

It is not written for consultation, it is very far from comprehensive, leaving out almost every key element of local needs assessment that should be the starting point for a plan, and its focus in practice is on the tactical, short term closure of five hospitals, while the strategic notion of a new hospital for "south Niagara" remained a largely abstract notion.

There was at that point no specific recommended site, no needs assessment to determine the scale of facility required, no identified source of funds (or estimate of the costs of servicing a loan or P3 scheme) to build the new hospital, and no clear explanation of what added benefits it would offer.

Paragraph 2 of the Executive Summary also underlines the fact that the main recommendations of the interim report "remain unchanged" – so his proposals that had been drawn up after just a few months in the job had not been moulded or developed as a result of any local discussions.

Kevin Smith expects people to take his word for it that he has received "wise and thoughtful advice" from "thousands of individuals with whom we met:" since there has been no formal consultation, all we are left with is a vague reference to undefined advice from an improbably large number of individuals.

Not only does the proposal omit key information that should be the basis for planning local hospital provision, it rejects the very idea of doing such work: **"Further study is most definitely not required!"** he exclaims (page 3). Even though he claims, "disagreement with respect to clinical siting" had previously prevented the formation of a "truly integrated single organisation" he apparently believed he had single-handedly overcome these problems.

A hospital site that's local to nobody

Whatever consensus may have emerged among Smith's chosen conversation partners appears, from a glance at the map, to be at the price of locating the new hospital (of indeterminate size) in the 'Queen Elizabeth Way and Lyons Creek area' (page 6).

This is not only conspicuously nearer the middle – or north – than the "south" of the Niagara area[14], but above all it is notable for the lack of substantial towns and population. Indeed the suggestion appears to represent the diametrical opposite of the "Interim Recommendation" to invite the Mayors of the "Southern Tier" to help choose a site, noting that:

> "Population density and access should be the primary consideration in determining location". (page 9)

Smith's document significantly offers no population figures, let alone a break down by age or any discussion of other specific needs, and there is no indication that these factors have been taken into account at all. In fact it seems that *absence* of local population was more of a criterion. The greenfield site in the area that has been selected, described in real estate jargon as "on the outskirts" of Niagara Falls, seems to ensure extended travel times for almost all concerned – patients seeking treatment, any relatives or friends hoping to visit them in hospital, and of course the staff without whom the hospital is just a building. This could require new roads or extensive improvements to roads which would have to carry more traffic.

It is clear from this why (despite heading a whole section "Environment" (p25) Smith did not commission any environmental impact assessment, which would have to quantify the scale of additional carbon emissions from thousands of private cars travelling each day to and from this new site. No estimates are made of travel times from the communities set to lose their local hospital, or the implications for ambulance services. Of course, given these omissions there is no discussion of how those with no car or limited mobility, especially the elderly who are on average heavier users of health services, and women with young children, might travel to and from the population centres of Niagara to the new far from local hospital.

Added to this is the question of affordability. Smith admits that the Minister may well be less than enthusiastic at his proposal for a "new southern site" hospital "in the backdrop of the fiscal pressures facing our province and country". But he claims – with absolutely no financial detail whatever – that building a new hospital "offers significant operating and ongoing capital savings" (page 4).

[14] Smith shares his quirky definition of "South," meaning the rest of the area other than St Catharine's, on p19

Other proposals and revisions to interim report

Smith supports the call from the Regional Chair and Mayors of "south" Niagara for two new **"Urgent Care Centres"** in south Niagara "Locations to be determined". Smith was adamant that these had to be "freestanding entities in leased space which work closely with the evolving primary care network and EMS." In other words they would remain insecure, allowing UCC services to be withdrawn if they are seen as too costly or ineffective.

Figure 8.23: UCC clinical exclusion criteria

Conditions suitable for UCC	Clinical exclusions (adults)	Clinical exclusions (children)
• The scope of the UCC will include both Minor Illnesses and Minor Injuries: ○ cuts and grazes ○ minor scalds and burns ○ strains and sprains ○ bites and stings ○ minor head injuries ○ ear and throat infections ○ minor skin infections / rashes ○ minor eye conditions / infections ○ stomach pains ○ suspected fractures • The interpretation of X-rays and other diagnostics/ investigations will be in scope • The treatment of Minor Fractures will be in scope. • Interventions considered in-scope include: ○ the manipulation of uncomplicated fractures ○ non-complex regional anaesthesia for wound closure ○ incision and drainage of abscesses not requiring general anaesthesia ○ minor ENT/ophthalmic procedures • There will be no lower or upper age limit for UCC patients	• Markedly abnormal baseline signs • Chest Pain (likely cardiac) • Complex fractures (e.g. open fractures, long bone fracture of legs, spinal injury) • Patients receiving oncological therapy • Sickle cell crisis • Acute Shortness Of Breath (inc. severe shortness of breath compared to normal, cyanosis, increased peripheral oedama) • Signs of severe or life threatening asthma • Airway compromise • Acute exacerbation of heart failure • Burns (> 5%; facial/eye; inhalation, chemical/electrical)•New CVA • Significant DVT • Temporarily unable to walk • Haematemesis/ Haemoptysis • Overdose / Intoxicated and not able to mobilise • Acute psychosis / neurosis • Significant head injuries	In addition to the adult exclusion criteria: • Acutely ill children (defined using PEWS) • Paediatric head injury • Procedure requiring sedation • Multiple pathologies deemed to be complex • Repeat attendances: 3 attendances in 3 months • Fever with non-blanching rash • Fitting • History of decreased or varying consciousness • Combination of headache, vomiting and fever • History of lethargy or floppiness

(Extract from NHS North West London SaHF DMBC Volume1 Edition1.1-2 p 254-5, available http://www.healthiernorthwestlondon.nhs.uk/sites/default/files/documents/SaHF%20DMBC%20Volume%201%20Edition%201.1.pdf)

However even if they are established, there should be no illusion that these UCCs would be equivalent to full scale emergency services: evidence from the U.K. shows that free-standing UCCs, whether nurse-led or primary care-led, are much more limited in the range of patients they can treat than those which are co-located with (and effectively serve as a triage service for) full emergency departments. They deliver a slightly enhanced level of primary care.

As can be seen from the extract above, in Britain the medical profession has laid down strict protocols on what can and cannot be done in a UCC: the only exceptions are where a UCC is immediately adjacent to, or part of a fully staffed Emergency Department, and

senior medical assistance can be called in to deal with any problems, or patients swiftly and simply transferred to access more sophisticated treatment.

The provision of such services at substantial distances from a fully equipped hospital may cause problems if patients with more serious and urgent health needs travel in error to them, believing that more comprehensive services are available.

The disruption of existing patterns of care in Niagara – and the eagerness often shown by leaders of such projects to convince local communities that 'emergency services' will be made available even after the closure of their local hospitals – could create conditions for that level of confusion where people are taking decisions in stressful circumstances and with only partial awareness of the limitations of the new service.

The proposal for two UCCs in Niagara also raises the question of whether such units would be open 24 hours a day or more limited hours, creating further uncertainty for patients. Experience in Britain suggests that free-standing UCCs seldom achieve a caseload sufficient for them to deliver value for money, especially when resources are limited by tight restrictions on funding.

In addition to the free-standing UCCs, for which no site has yet apparently been identified, Smith also reluctantly agreed that while Obstetric and Paediatric services should be "consolidated" at the new St Catharine's hospital, with the idea that they would eventually be transferred to the notional new hospital in the "South", there was a "possibility" of a proposal to "determine the feasibility for a Birthing Centre in Niagara".

As promises go, it is hardly possible to get more vague that this. Smith's report does not discuss staffing or resourcing the service: the cagey reference to the proposal makes it clear he is unwilling to take it any further.

And as if to rub salt into the wounds of communities losing services in their local hospitals, Smith moves straight into a discussion of selling off the sites, giving local municipalities first refusal, with any capital generated to be used to build health resources elsewhere.

Financial issues

The context of the proposals was sketchily set out in the September 2012 document, which (page 25) alludes to the freeze on health spending by the Ontario government, while inflation was running at 3%. Smith goes on from this to forecast that the Niagara Health System would face deficits rising from $13.7m in 2012/13 to $29m in 2014/15. This is in fact one of the main arguments for reshaping hospital services, to generate savings to balance the books of the local health system:

> "As a result of this economic pressure, future consolidation of programs and services, increased efficiencies and reduced costs are both essential and unavoidable" (p25).

However it appears from the minutes of the NHS Board of Directors that despite the delay in closing the first of the five hospitals to face the axe, in fact the NHS is running at a small surplus[15].

Unfortunately the minutes are so minimal in scope they give no way of knowing how the necessary economies have been made. While financial pressures may be used by management to force through otherwise unpopular measures, the relaxation of those pressures are very seldom reflected in any revised plans for services.

The use of a whole page graph on page 27 of Smith's final report, made up of outdated figures going back to 2006, without any explanation of what it is supposed to show or how it relates to the proposals being put forward, is a tell-tale symptom of a lack of appropriate detail.

On page 29 there is an equally obscure discussion of how many staff may need to be replaced over the following six years – without offering any proper breakdown of the workforce in NHS, how many of them are doctors, nurses, therapists and other sections of staff, or what the relationship is between the caseload of the various hospitals and services and the target staffing levels.

Amid all of these missing bits of information to explain the proposals, it comes as somewhat of a surprise to read (p31) of Smith's "new initiative" to develop a "Culture of Transparency", which seems to be exclusively focused on Smith's relationship with the news media.

[15] http://www.niagarahealth.on.ca/en/june-24-2014-meeting

Costing the new hospital

The cost estimates that were made of Smith's proposals – based on bed numbers which are unexplained[16] – appear in `Appendix A' as "order of magnitude estimates" drawn up for Smith by Hanscomb, quantity surveyors, on 2012 prices. Hanscomb costed five "Options," even though it's clear that Smith is only arguing for Option 1: a new "SOUTH" Niagara Hospital, alongside the St. Catharine's Healthcare Complex in the NORTH, a single "new" stand-alone Urgent Care Centre (UCC), and CLOSURE of all other sites.

For form's sake four other hypothetical "options" are also costed out for Appendix A, but there is no real choice, since not one of the costed plans is for a real alternative approach, a "do minimum" option that would upgrade the existing buildings where they are, and possibly expand one or more of them to deliver a wider range of services. This would undoubtedly cost less than building a new hospital, and keep services local for those who need them. The closest estimate to that would be Option 3, which has a total extra project cost of only $5 million compared with Option 1.

[16] In fact, as noted earlier, there is no assessment of hospital bed capacity needed to serve Niagara's population in any of the documents.

No guarantee of capital funding

By the summer of 2014 the only commitment from Ontario's Health and Long Term Care Minister towards the $800 million-plus project had been a grant of $26.2 million to cover the preliminary costs of management consultants in planning the new hospital and UCCs.

A potential site had been identified for the hospital "on the outskirts of Niagara Falls" – more to the North of the area than South. Councils in Niagara Falls and Fort Erie had promised modest contributions towards the cost of the scheme, while Welland political leaders kept on arguing for their hospital to remain open, questioning the viability of the Smith plan, and whether the capital will be available.[17]

So vague were the government commitments to the idea of a new hospital, it was not until November 2014, more than *two years* after Smith's report, that management consultants were belatedly brought in to do some of the basic work that should have been done at the beginning to identify the local needs and the required scale of hospital services:

> "The first step is in developing a Clinical Services Plan that will inform the capital planning process. Ensuring that residents of Niagara have the right care at the right time in the right place is more than building new facilities—**it requires Niagara Health System to understand community needs and plan for them now, and in the future**. As such, NHS has engaged the short-term services of KPMG LLP and Preyra Solutions Group (PSG) to work with Niagara Health System and its partners **to create an evidenced based, outcomes-focused Clinical Services Plan**."
>
> (NHS Media Release on Capital Planning, November 27, 2014)[18]

[17] Spiteri, R (2014) Planning for Falls hospital underway: Diodati, Niagara Falls Review June 20, available http://www.niagarafallsreview.ca/2014/06/20/planning-for-falls-hospital-underway-diodati

[18] http://www.niagarahealth.on.ca%2Ffile%2Fdownload%2FbFNYJIbLLVMnB9vjdybARQ&ei=MwYIVZ_MFcj1aqHxgNgJ&usg=AFQjCNGg8ar2sNBTtqJ7h5sWVbzauyazhw

Public opinion

Despite the best efforts of POLLARA in its polling of 1,000 local people in communities across Niagara, in 2012 with recent memories of the C Difficile outbreak, and asking questions designed to maximise acceptance of the plans[19] it is interesting to note the clear (but far from surprising) finding of the opinion polling that

> "Despite a stated preference for quality over quantity and a willingness to travel further to receive better care, most Niagara residents *oppose* the supervisor's recommendation to close the sites in Port Colborne, Fort Erie, Niagara Falls and Welland, and replace them with two new facilities in South Niagara.
>
> "The four directly-affected communities are among those most opposed."
>
> (POLLARA page 7)

The pollsters go on to warn that:

> "If residents are to accept longer travel times, the "highest quality of care possible" part of the promise must be kept. In other words, trading off quantity must yield quality." (p7)

But of course there is no guarantee this will happen: the funds to build the promised new hospital and UCC (on "leasehold" property) have not been secured. Ontario health budgets continue to be squeezed year after year.

Even at the best of times finalising such projects takes years, and the earliest possible date, assuming Smith's estimate of six years from the closures – would be 2021. That is six or more long years for the anger to build in the local communities that stand to lose their hospitals before any replacement is even finally agreed, let alone built.

[19] Such as "Overall, how willing would you be to travel as much as 30 minutes further for hospital care services ***if you knew the extra distance travelled meant that you could get the highest quality of care possible?***" POLLARA p 24 [emphasis added]

What questions should the report have answered?

1. Establishing the need for a new hospital facility, which services it should provide and on what scale involves a **serious analysis of the catchment population** and projections of future population trends – by **age group**, and standardised mortality ratios, identifying any specific factors such as social deprivation, health status and levels of disability, and the percentage of older people living alone in each distinct community within the catchment area.

2. **A proper survey in real traffic conditions** needs to be carried out to **establish realistic travelling times** from each part of the intended catchment area to the possible hospital site: this is especially true of Niagara, where the opinion poll showed concern focused on the accessibility of the hospital.

3. **Public transport options**, patient transport services or other options also need to be investigated to ensure that those who do not have, or are not well enough to drive a car are able to get reasonably easily and affordably to and from the hospital from the likely catchment areas, bearing in mind a large proportion of the patients will increasingly be older people, or families on low incomes. Experience in Britain is that bus companies are extremely reluctant to alter their routes to ease the use of public transport to hospital: and bus services commonly stop in the late evening, when staff may need to travel home, or in for night shifts, and patients or their relatives may need to travel.

4. **An analysis of lifestyle issues** (prevalence of tobacco smoking, drug or alcohol abuse, obesity among children or adults) needs to accompany statistics on existing patterns of illness and use of health care.

5. It is important to identify any **specific local variations**, for example in levels of hypertension, diabetes, chronic obstructive pulmonary disease, coronary heart disease – and the level of health care resources – hospital beds, outpatient services, community-based health teams, etc., currently allocated to these, and the staff numbers required to deliver the services.

6. From this solid basis of detailed study of the local population and their health needs, together with a proper audit of the levels of services that are available or planned to be delivered outside the hospital setting, **projected bed numbers can be estimated**, along with other aspects of hospital provision – orthopaedic operating theatres, specialist diagnostic imaging, etc.

7. From the size of the hospital required, quantity surveyors such as Hanscomb can **estimate the likely floor area and building costs**, and a Business Case can be drawn up for consultation with staff and local communities, as the basis of an appeal for government capital funding. Consultation helps to test that the Business Case and its core assumptions are accurate and sufficiently comprehensive before the bid is put in for large sums of capital investment.

Funding also needs to be sufficient not simply for the build and equipment of a new hospital, but also to cover inevitable periods of double running costs during the transition to the new site.

It is striking that, of all these stages of the process, the Niagara Health System under Kevin Smith has carried out only the hypothetical costing of a building, and appears to have done none of the other basic work to establish a sound project.

Years ahead of any possible new hospital development, it seems clear from the documents published so far that no extra services are in place to care for patients displaced from Niagara-on-the-Lake, or future cohorts of patients as more of the remaining four other doomed hospitals are closed.

This is a massive and entirely avoidable gamble with the health of patients with complex continuing care needs: the Niagara Health System, running as it says in surplus at the end of 2014/15, must rethink this unnecessary and premature step, and focus on securing agreement and funding for the new hospital, which needs to be up and running before existing services are closed.