MANAGING DEMAND FOR URGENT CARE – THE ENGLISH NHS 111 EXPERIENCE

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Summary: NHS 111 is a telephone-based service in England designed to improve access to appropriate care for urgent health problems. Evaluation of four pilot sites revealed that the service was well liked by users but did not change the way people accessed care or produce expected system efficiencies; it also increased emergency ambulance activity. National roll out without results of the evaluation led to significant challenges when the service was introduced. NHS 111 is now firmly embedded in the NHS in England but it is recognised that there is scope for further improvement and a programme of work is in place to enhance the service.

Keywords: NHS 111, Emergency Medical Care, Urgent Care Services, Pilot Evaluation, NHS England

Introduction

Internationally, demand for emergency and urgent care grows every year. In England, demand for emergency department care has been reflected in growth in emergency department attendances, calls to the 999 ambulance service and contacts with other urgent care services, including primary care and telephone-based services. Since the 1960s, demand for emergency department services has doubled, with population utilisation increasing from 138 per 1000 people per year to 267 per 1000 in 2012/13. Similarly, calls to the 999 ambulance service increased by 160% between 1994 and 2014. Over the last twenty years there have been a number of reviews of urgent care, policy recommendations for service changes and service-level innovations, all of which were aimed at improving access to and delivery of urgent care. As the range of additional services available to address urgent care needs has grown (for example, primary care out-of-hours services, minor injury units, walk-in centres, urgent care centres) a central theme has been the uncertainty and complexity this presents for the public in making decisions about how to access urgent care. Telephone-based services were introduced to try and simplify this process, with NHS Direct, a nurse-led telephone assessment and advice service, implemented from 2000 in England and followed by similar services in Wales and Scotland. However, subsequent consultations with the public revealed that confusion about accessing
services remained a problem and in response to this a new telephone-based service, NHS 111, was developed.

The NHS 111 service

The objectives of the NHS 111 service is to simplify access to non-emergency health care by providing a memorable number – 111 – that is free to the caller, provides consistent clinical assessment at the first point of contact, and routes callers and patients to the right NHS service, first time. The service is available 24 hours a day, 365 days a year to respond to requests for health care where the situation is not life-threatening and callers are unsure about what service they need, or if they need to access care out-of-hours. The expected benefits of this service are that it should improve the user experience by providing a modern entry point to the NHS and easy access to more integrated services, and improve efficiency in the emergency and urgent care system by matching patient needs to the right service. The key features of the service are given in Box 1.

As a first step, the Department of Health in England identified four pilot sites in Durham & Darlington, Nottingham, Luton and Lincolnshire to implement NHS 111 and at the same time commissioned an independent service evaluation to assess the impact of the service and provide robust evidence on effectiveness to inform decisions about any subsequent national roll-out. These four pilot sites became operational between August and December 2010.

Pilot site evaluation

A mixed methods study was designed to assess processes, outcomes and costs for the new service. This included a controlled before and after design to measure the impact of NHS 111 on system activity and population use of services in the four pilot and three control sites; qualitative studies to assess patient experience and satisfaction and to identify the challenges, barriers and facilitators associated with introducing the service experienced by the pilot sites; and an economic evaluation. During the first year of operation, the four pilot services managed just over 350,000 calls. All of the services met national quality standards of less than 5% of calls abandoned and at least 95% of calls answered within 60 seconds. On average, across all sites, 11% of calls were sent for an emergency ambulance response, 6% were advised to go to an emergency department, 56% were directed to primary care, 5% to other services and 22% were provided with advice and did not need a service.

Impact on the emergency and urgent care system was assessed by measuring monthly activity for five key services: emergency department attendances; urgent care services attendances/contacts (e.g. general practice out-of-hours, walk-in centres); calls to the NHS Direct telephone service; calls to the emergency ambulance service and ambulance service incidents where a response was needed for two years before and one year after implementation of NHS 111 in each pilot site; and a matched control site. For all sites combined, there was no statistically significant change in emergency ambulance calls, emergency department attendances or urgent care contacts/attendances. There was a statistically significant reduction in calls to NHS Direct of 193 calls per 1000 NHS 111 triaged calls per month. There was also a statistically significant increase in emergency ambulance service incidents of 29 additional incidents per 1000 NHS 111 triaged calls per month. This equates to a 3% increase in ambulance activity or, for a service responding to 500,000 calls per year, an additional 15,000 responses.

A postal survey of users of the new service in each pilot site found that satisfaction with NHS 111 was very good, with 73% of respondents reporting that they were ‘very satisfied’ and 19% that they were ‘quite satisfied’ with the new service. Satisfaction levels were lower for some aspects of the service than others, in particular relevance of questions asked and advice given. 85% of respondents indicated that NHS 111 had enabled them to contact the right place first time although this may not have occurred for at least 2% of users. Compliance was high with 86% indicating they had complied with all of the advice given, and 65% reporting the advice given had been very helpful. Respondents were also largely clear about when to use NHS 111.

In addition, a population telephone survey was conducted before and after the introduction of NHS 111 in both the pilot and control sites to assess use of urgent care services. The surveys did not identify any change in perceptions of urgent care for recent users of emergency and urgent care services or any change in satisfaction with urgent care or the NHS following the introduction of NHS 111. The population surveys did reveal a high level of awareness about the new service in two pilot sites (>70% of the population had heard of NHS 111) but lower awareness in the other two sites (<50%).

Box 1: Key features of the NHS 111 service

- Calls to NHS 111 are assessed by a trained, non-clinical call adviser using the NHS Pathways clinical assessment system to determine both the type of service needed and the timescale within which help is required.
- The call handling system is electronically linked to a skills-based directory of local services so that callers can be advised about the appropriate services available at the time of their call.
- Where possible, appointments can be made with the correct service at the time of the call.
- Calls that require further clinical assessment can be transferred to a clinician within the same call with minimal need for a call-back.
- If a call requires an emergency ambulance response, a vehicle can be dispatched without the need for further triage.

Source: Authors.
Developing and implementing the new service posed significant challenges within the pilot sites. The key issues identified that contribute to successful implementation are described in Box 2. Despite some positive findings, particularly patient experience and satisfaction, NHS 111 did not have a significant impact on system efficiency during the first year of operation. This might be explained by the small ‘dose’ of NHS 111 within the wider emergency and urgent care system or the early stage of development at which it was evaluated (one year). It takes time for early problems to be identified and resolved, for a new service to become established with users, and for reflection on how the service can be improved. The evaluation highlighted some issues that needed further exploration, the most important of which were further scrutiny of the relevance of some questions during the assessment process and the reasons for the increase in ambulance utilisation. Also importantly, during the pilot site testing the NHS Direct service was still operating. This meant that the impact of “turning off” this service and transferring all of the existing call activity to the new service could not be measured and the effects could not be predicted.

### National roll-out

The initial four pilot sites were identified in 2009, with implementation during 2010 and at the same time the evaluation of those sites was commissioned with a publication date of 2012, after a full year of operation, followed by decisions about providing a national service. However, during 2010 there was a general election, a change of government and an early decision made in Summer 2010 that NHS 111 would be rolled out as a national service by 2013. This meant that across the NHS plans had to be made and services procured and developed without reference to any findings from the pilot sites evaluation. The final evaluation report was published in Autumn 2012 but by this time there was little scope for services in development to benefit from the findings. By the end of 2012 there were fourteen operational NHS 111 sites covering just over 20% of the population. In order to meet the original 2013 deadline a large number of services went live in April 2013 when coverage increased sharply to 70% of the population. At the same time, the NHS Direct service began to be discontinued although the impact of transferring all calls for urgent care to the NHS 111 service had not been established.

Introducing a large number of services that had been rapidly established without the benefit of evaluation information resulted in a difficult period for the NHS. Some services were unable to cope initially in terms of answering and assessing calls in a timely manner and a substantial amount of negative publicity about the service in the UK media was generated. However, as services became established these problems were resolved and by the end of 2013 there was almost universal coverage across England.

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**Box 2: Activities associated with successful implementation of NHS 111**

- The strategic, management and operational processes involved in delivering the service are complex, difficult and time consuming
- A clear and explicit service specification is needed to support planning and development
- Success is dependent on the committed engagement of relevant agencies and a dedicated project team to manage the process from start to implementation and maintenance
- There are significant technical issues around licensing, adaptation and integration of different telephone and IT systems that need to be linked to deliver seamless call handling
- A robust period of testing to ensure consistency of assessment, alignment of dispositions to services and system resilience is critical before a service goes live
- The Directory of Services linked to dispositions and appropriate referral is crucial
- There needs to be sufficient capacity to support technical implementation and training for the call assessment system used
- 111 is just a telephone number – it is what is behind it that is important and how it operates as part of an integrated 24/7 urgent care system.

Source: Authors.
managing emergency care with its central role in assessing and signposting requests for urgent care to appropriate services. However, the review also recognised that there was scope to further enhance this service and reduce the burden on ambulance services and possibly emergency departments and provide better integration with community-based services by, for example, introducing additional senior clinician assessment in to the triage process. As a result, there is an ongoing programme of work to further develop and enhance NHS 111 so that it might better assess and direct users through the complex system of services and pathways present in a modern emergency and urgent care system. Ongoing efforts to evaluate the effects of changes will be needed to assess whether they deliver the intended benefits. The successes, challenges and failures associated with introducing NHS 111 highlight the dangers of implementing policy without allowing sufficient time for evaluation and evidence gathering to inform important decisions about significant change in health care provision.

Conclusions

NHS 111 was conceived as a telephone-based service that could both improve patient experience and emergency and urgent care system efficiency by assessing and signposting to the right service, requests for urgent (not life-threatening) health care. Evaluation of pilot sites showed there were some benefits for the service but not all of those expected were realised. In particular, one service NHS 111 was expected to decrease pressure on, the emergency ambulance service, actually saw additional activity. This continues to be a substantial problem requiring further research to understand why this happens and to identify potential solutions that might resolve it. More broadly, the limitations of the service are realised and there is an ongoing programme of work to further develop and enhance NHS 111 so that it might better assess and direct users through the complex system of services and pathways present in a modern emergency and urgent care system. Ongoing efforts to evaluate the effects of changes will be needed to assess whether they deliver the intended benefits. The successes, challenges and failures associated with introducing NHS 111 highlight the dangers of implementing policy without allowing sufficient time for evaluation and evidence gathering to inform important decisions about significant change in health care provision.

Figure 1: Disposition of triaged NHS 111 calls

<table>
<thead>
<tr>
<th>Disposition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulance dispatches</td>
<td>11%</td>
</tr>
<tr>
<td>Recommended to attend A&amp;E</td>
<td>8%</td>
</tr>
<tr>
<td>Recommended to attend primary and community care</td>
<td>62%</td>
</tr>
<tr>
<td>Recommended to attend other service</td>
<td>4%</td>
</tr>
<tr>
<td>Not recommended to attend other service</td>
<td>15%</td>
</tr>
</tbody>
</table>

Source:

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References