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Title **The Swine Flu Triage (SWIFT) Study: Development and Ongoing Refinement of a Triage Tool to Provide Regular Information to Guide Immediate Policy and Practice for the Use of Critical Care Services During the H1N1 Swine Influenza Pandemic**

Agency **NETSCC, HTA, NIHR Evaluation and Trials Coordinating Centre**
Alpha House, University of Southampton Science Park, Southampton, SO16 7NS, United Kingdom;

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www.netscc.ac.uk/supporting_research/flu_project_portfolio/098601.asp

Aim

To use existing critical care and early pandemic data to inform care during the influenza A 2009 (H1N1) pandemic (with a possible use for triage if demand for critical care seriously exceeded supply); and to monitor the impact of the H1N1 pandemic on critical care services, in real time, with regular feedback to critical care clinicians and other relevant jurisdictions to inform ongoing policy and practice.

Conclusions and results

Modeling: Cancelled or postponed, elective or scheduled surgery saved calendar days of critical, Level 3, and advanced respiratory care of 17%, 11%, and 10%, respectively. Savings varied across units. Using routine, physiological variables, the best triage models, for all and for acute respiratory admissions, achieved only satisfactory concordance of 0.79 and 0.75, respectively. Applying the best model on all admissions indicated that approximately 12.5% of calendar days of critical care could be saved. Cohort study: Research governance approvals were achieved for 192 acute hospitals, for 91 within 1 day of central research and development approval across the 5 countries. In total, 1725 cases (562 confirmed) were reported. Confirmed cases were young (mean 40 years), had low severity of acute illness on presentation (61% CURB-65 [confusion, urea, respiratory rate, blood pressure, age over 65 years] 0–1), but had long stays in critical care (median 8.5 days) and were likely to be ventilated (77% for median 9 days). Risk factors for acute hospital death were similar to those for general critical care admissions. SWIFT was rapidly established. Models based on routine physiology suggested limited value for triage. More data and further modeling are warranted. The pandemic did not approach the worst-case scenario modeling, and UK-confirmed H1N1 cases appeared similar to those reported internationally.

Recommendations

See Abstract link www.netscc.ac.uk/supporting_research/flu_project_portfolio/098601.asp.

Methods

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Further research/reviews required

Further research on triage modeling, at each step in the care pathway, is a high priority and important for critical care decision-making. Such research should have two main themes: 1) development and validation of triage models; and 2) potential use of such models in critical care decision-making. With respect to the first theme, given that triage decisions in a pandemic should be made for all patients considered for critical care (not just those afflicted by the pandemic), data for, and research on, developing and testing the utility of triage models for critical care does not require a pandemic situation. However, developing such triage models requires collecting accurate data on all acute hospital admissions potentially requiring critical care. This would enable fuller exploration of decision-making around critical care admission and data on the duration and trajectory of critical illness; enabling exploration of triage models to consider earlier discontinuation of critical care for patients initially admitted to critical care. In addition to conventional validation of such triage models, validation could also encompass a comparison with subjective clinical decision-making and assessment of the potential impact of any triage model on future pandemics.

Written by Professor Kathryn Rowan, NETSCC, United Kingdom