

less have been reported in single centre hospitals, but never in an entire population. QuICR (Quality Improvement and Clinical Research) Alberta Stroke Program aimed to reduce DNT to a median of 30 minutes across the Canadian province of Alberta. **Methods:** We used the Improvement Collaborative Methodology from early 2015 to September 2016 with participation from all 17 Stroke Centres in Alberta. This methodology included 4 face-to-face workshops, site visits, webinars, data collection, data feedback, intensive process mapping, and process improvements. We compared data in the pre-intervention period from 2009-2014 (collected during the Alberta Provincial Stroke Strategy) to data in the post-intervention period from March 2016-February 2017 (collected during the QuICR DTN Collaborative). Data from January 2015-February 2016 were excluded, as improvements were being implemented during this time. **Results:** There were a total of 2,322 treated cases in the pre- and post-intervention periods. The results show that the median DNT dropped from 68 minutes ($n = 1,846$) in the pre-intervention period to 36 minutes ($n = 476$) in the post-intervention period ($p < 0.001$). There were reductions in DNT across all hospital types: median DNT dropped from 63 to 32 minutes in Urban Tertiary Centres ($p < 0.001$), from 73 to 32 minutes in Community with 24/7 neurology ($p < 0.001$), from 85 to 62 minutes in Community with limited/no neurology ($p < 0.001$), and from 74 to 52.5 minutes in rural centres ($p < 0.001$). **Conclusion:** There were 21.5 to 41 minute reductions in median DNT across all hospital types including smaller rural and community hospitals. A targeted multi-site improvement collaborative can be an effective intervention to reduce DNT across an entire population.

Keywords: door to needle times, quality improvement, acute stroke

MP29

Creation of the CAEP Acute Atrial Fibrillation/Flutter Best Practices Checklist

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Introduction: Patients with acute atrial fibrillation or flutter (AAFF) are the most common acute arrhythmia cases requiring care in the ED. Our goal was to adapt the existing Canadian Cardiovascular Society (CCS) AF Management Guidelines into an emergency physician-friendly best practices checklist. **Methods:** We chose to adapt, for use by emergency physicians, existing high-quality clinical practice guidelines (CPG) previously developed by the CCS using the GRADE system. We used the Canadian CAN-IMPLEMENT© process adapted from the ADAPTE Collaboration. We created an Advisory Committee consisting of 14 academic and community emergency physicians, three cardiologists, one PhD methodologist, and two patients. The Advisory Committee communicated by a two-day face-to-face meeting, teleconferences, and email. The checklist was prepared and revised through a process of feedback and discussions through ten iterations until consensus was achieved. We then circulated the draft checklist for comment to approximately 300 emergency medicine and cardiology colleagues whose written feedback was further incorporated into the final approved version. **Results:** The final CAEP ED AAFF Guidelines are comprised of two algorithms and four sets of checklists, organized by 1) Assessment and Risk Stratification, 2) Rhythm and Rate Control, 3) Long-term

Stroke Prevention with the CHADS-65 Algorithm, and 4) Disposition and Follow-up. The guidelines have been endorsed by CAEP and accepted for publication in the Canadian Journal of Emergency Medicine. During the consensus and feedback processes, we addressed a number of issues and concerns. We highlighted the issue that many unstable patients are actually suffering from underlying medical problems rather than a primary arrhythmia. One controversial recommendation is to consider rate control or transesophageal echocardiography guided cardioversion if the duration of symptoms is 24-48 hours and the patient has two or more CHADS-65 criteria. We emphasize the importance of evaluating long-term stroke risk by use of the CHADS-65 algorithm and encourage ED physicians to prescribe anticoagulants where indicated. **Conclusion:** We have created the CAEP AAFF Best Practices Checklist which we hope will standardize and improve care of AAFF patients in all EDs across Canada. We believe that most of these patients can be managed rapidly and safely with ED rhythm control, early discharge, and appropriate use of anticoagulants.

Keywords: atrial fibrillation, guidelines, cardiology

MP30

Impact des bicarbonates sur le devenir des patients souffrant d'un arrêt cardiaque préhospitalier

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Introduction: Les patients souffrant d'un arrêt cardiaque extra hospitalier (ACEH) sont fréquemment traités à l'aide de soins avancés en réanimation cardiovasculaire (SARC). Dans ce contexte, des bicarbonates de sodium sont parfois administrés à des patients en arrêt cardiaque réfractaire chez qui une acidose métabolique importante, une hyperkaliémie ou une intoxication est suspectée. Puisqu'il n'y a que peu de données quant à cet usage, l'objectif de la présente étude est d'évaluer l'association entre le traitement à l'aide de bicarbonate de sodium (une dose ou plus) et le devenir (retour de circulation spontané et survie au congé) chez les patients souffrant d'un ACEH. **Methods:** La présente étude de cohorte a été réalisée à partir des bases de données de la Corporation d'Urgences-santé dans la région de Montréal entre 2010 et 2015. Les patients adultes ayant souffert d'un ACEH d'origine médicale traités en préhospitalier par des paramédics de soins avancés prodiguant des SARC ont été inclus. Les associations d'intérêt ont été évaluées initialement à l'aide de régressions logistiques univariées, puis à l'aide de régressions logistiques multivariées ajustant pour les variables socio-démographiques et cliniques pertinentes. **Results:** Un total de 1973 patients (1,349 hommes et 683 femmes) d'un âge moyen de 66 ans (± 17) ont été inclus dans cette étude, parmi lesquels 77 (3,8%) ont reçu une dose de bicarbonate, 763 (37,5%) ont retrouvés un pouls en pré-hospitalier et 222 (10,9%) ont survécu jusqu'à leur congé de l'hôpital. Sans ajustement, il y avait une association négative entre le traitement à l'aide de bicarbonates et le retour de circulation spontané (rapport de cotes [RC]=0,46 [intervalle de confiance {IC} 95% 0,27-0,79], $p = 0,005$) et la survie au congé (RC=0,21 [IC 95% 0,05-0,86], $p = 0,030$). Cependant, ces associations n'étaient plus significatives suite à l'ajustement pour les autres covariables (RC ajusté=0,63 [IC 95% 0,34-1,18], $p = 0,15$ et RC ajusté=1,69 [95% IC 0,29-10,01], $p = 0,56$). **Conclusion:** Il n'y a pas d'association indépendante entre le traitement à