predisposing factors, enabling resources, reinforcing factors, and situational factors. The prevalence of recent HIV testing was 28%. Recent HIV testing was associated positively with male gender, education level, having public insurance, having same sex sexual behavior, African and Hispanic ethnicity; whereas, age, income-to-poverty ratio, and Asian ethnicity were associated negatively with recent HIV testing. Public health social workers are advised that targeted HIV testing for Asian, economically disadvantaged, female older adults is needed to increase HIV awareness and detection and to decrease late diagnosis of HIV. Provided public insurance was identified as a predictor of recent HIV testing, facilitating economically disadvantaged older adults’ eligibility for public insurance will likely improve access to HIV testing services and increase HIV testing rates.

COMPARISON OF FOUR RISK SCORING SYSTEMS FOR OLD PATIENTS: A PROSPECTIVE MULTICENTER STUDY IN CHINA

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Objective: There are a few scoring systems in emergency departments (ED) to establish critically ill patients quickly and properly and to predict in-hospital death. We aim to compare the efficacy of National Early Warning Score (NEWS), Modified Early Warning Score (MEWS), Rapid Emergency Medicine Score (REMS) and quickSOFA (qSOFA) on in-hospital mortality in general older ED patients in different areas of China.

Methods: This is a prospective, multicenter and observational study. The study included general patients admitted to the EDs of nine teaching hospitals between 1st October, 2013 and 31 May, 2014. The primary outcome of the study is in-hospital mortality. Accuracy in predicting outcome measures was assessed by calculating the area under receiver operating characteristic curve (AUC).

Results: Total patients were 1528 (51.6% male, 48.4% female). The mean age was 75.86±8.46. Fifty-eight patients were dead in-hospital; the NEWS AUC for predicting in-hospital death was 0.834(0.778–0.890), the MEWS AUC was 0.753(0.679–0.827), the REMS AUC was 0.718(0.638–0.799) and the qSOFA AUC was 0.780(0.714–0.846). NEWS was found to have a better predictive strength than MEWS (p<0.001), REMS (p=0.002), qSOFA (p=0.020) in terms of predicting in-hospital mortality of patients presenting to ED, while the differences between MEWS, REMS and qSOFA were not significant.

Conclusions: The efficiency of NEWS was found to be superior to MEWS, REMS and qSOFA as a predictor of in-hospital mortality in older ED patients. The qSOFA, a score developed for predicting sepsis patients’ in-hospital mortality, can also be used as a predictor of in-hospital mortality in older ED patients.

ASSOCIATION OF LIFELONG EXPOSURE TO COGNITIVE RESERVE-ENHANCING FACTORS WITH DEMENTIA RISK

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Background and aims: We examined the association of cognitive reserve-related factors over the lifespan with the risk of dementia in a community-based cohort of older adults.

Methods: Information on early-life education, socioeconomic status, work complexity at age 20; mid-life occupation attainment; and late-life leisure activities was collected in a cohort of non-demented community dwellers (n=602) aged 75+ residing in Stockholm, Sweden in 1987–1989. The cohort was followed up to 9 years (until 1996) to detect incident dementia cases. Participants who developed dementia three years after the baseline were excluded. Structural Equation Modelling was used to generate latent factors of cognitive reserve from early-, mid-, and late-life.

Results: A reduced risk of dementia was associated with early (RR: 0.6; 95% CI: 0.4–0.9), adult (RR: 0.6; 95% CI: 0.4–0.9), and late life (RR: 0.5; 95% CI: 0.4–0.7) reserve-enhancing latent factors in separate multivariable Cox models. Late life (RR: 0.7; 95% CI: 0.5–0.9) and partially, midlife factors (RR: 0.7; 95% CI: 0.5–1.06) preserved their association, but the effect of early life factor was attenuated (RR: 0.8; 95% CI: 0.5–1.2) in mutually adjusted model. The risk declined progressively with cumulative exposure to reserve-enhancing latent factors, and having high reserve scores in all three periods was associated with the lowest risk of dementia (RR: 0.40; 95% CI: 0.20–0.81). Similar associations were detected among APOE ε4 allele carriers and noncarriers.

Conclusions: Cumulative exposure to reserve-enhancing factors over the lifespan is associated with reduced risk of dementia in late life, even among individuals with genetic predisposition.

HEART DISEASE, DIABETES AND DEMENTIA’S ASSOCIATION WITH FUNCTIONAL TRAJECTORIES OVER 5 YEARS

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Prevalence of functional disability related to chronic diseases is expected to increase as the population ages. Given that multimorbidity is common in older adults, we focus on heart disease, diabetes, both require complicated self-care, and dementia, which may make self-care more difficult, associations with functional disability over five years. Participants were a nationally representative sample of Medicare beneficiaries ages ≥65 years from 2011–2015 (N=7,609) from the National Health and Aging Trends Study. Annual in-person interviews included sociodemographic information, self-reported, physician-diagnosed chronic conditions, activities of daily living (ADL) and cognitive status. Trajectories of functional decline and attrition over 5 years were jointly estimated using group-based trajectory modeling and generalized to national estimates. Associations between ADL trajectory membership and diabetes, heart disease and dementia were examined using multinominal logistic regression, while