# I ricoveri potenzialmente evitabili in RSA

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1. Che cosa sono i ricoveri potenzialmente evitabili?
2. Perchè è importante ridurre il loro numero?
3. Quali sono le evidenze scientifiche?
4. Quali sono le strategie suggerite dalla letteratura internazionale?

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# Quali sono i ricoveri potenzialmente evitabili?

Potentially avoidable hospitalizations (PAHs) for NH residents refer to hospital admissions that follow acute flare-ups of clinical conditions that could have been avoided if appropriate preventive care in the NH had been provided. Moreover, they include admissions for conditions that can be safely and effectively managed in the NH.

*J Am Geriatr Soc*. 2012;60:821–829

# Patologie causa di PAH

| | PAH | |
|---|---|---|
| | ACSCs | ANHACs |
| Urinary tract infection | 590.0, 590.1, 590.2, 590.3, 590.8, 590.9, 595.0, 595.1, 595.2, 595.4, 595.89, 595.9, 597.0, 598.00, 598.01, 599.0, 601 | |
| Pneumonia* | 481, 482.2, 482.3, 482.4, 482.9, 483, 485, 486 | 480, 482.0, 482.1, 507.0 |
| Sepsis | — | 038 |
| *Clostridium difficile* infection | — | 008.45 |
| Diarrhea, gastroenteritis | — | 003.0, 004, 005, 006.0, 007, 008 (except 008.45), 009, 558.9, 787.91 |
| Constipation/fecal impaction, obstipation | — | 560.39, 564.00, 564.01, 564.09 |
| Injuries | — | 800–897, 900–995 |
| Cellulitis | — | 681–683, 686 |
| Skin ulcers | — | 707.0, 707.1, 707.8, 707.9 |
| Asthma, COPD | 490, 491, 492, 493, 494, 496, 466.0, 466.1 | |
| Angina | 411.1, 411.8, 413 | |
| Congestive heart failure | 398.91, 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428, 518.4 | |
| Poor glycemic control† | 250.02–250.03, 250.1–250.9, 251.0, 251.2, 790.29 | |
| Hypertension | 401.0, 401.9, 402.00, 402.10, 402.90, 403.00, 403.10, 403.90, 404.00, 404.10, 404.90 | |
| Hypotension | — | 458.0, 458.1, 458.21, 458.29, 458.8, 458.9 |
| Dehydration‡ | 276.5 | 276.8, 584.5–584.9, 588.8, 588.9 |
| Perforated appendicitis | 540.0, 540.1 | |
| Anemia | — | 280, 281, 285.2, 285.9 |
| Weight loss—failure to thrive | — | 783.2, 783.3, 783.7 |
| Nutritional deficiencies | — | 260–263, 268.0, 268.1 |
| Seizures | — | 345, 346, 436, 780.31, 780.39 |
| Delirium, acute confusion | — | 290.3, 290.41, 290.81, 293.0, 293.1 |
| Psychosis, severe agitation | — | 290.42, 290.43, 290.8, 290.9, 293.8, 293.9, 297, 298 |
| Chest pain | — | 786.5 |
| Fever | — | 780.6 |

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L’ospedalizzazione di pazienti residenti in RSA è un’evenienza frequente che dipende da multipli fattori:

- condizione clinica
- fattori demografici
- caratteristiche dell’RSA
- politiche di disincentivo

**Ricoveri potenzialmente evitabili: 11-67%**

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**Perchè ridurre i ricoveri nei pazienti istituzionalizzati?**

- generano ansia nei familiari
- generano disagio al paziente
- aumenta il rischio iatrogeno
- aumentano i costi della gestione
- aumentano i rischi legati all'ospedalizzazione senza migliorare il percorso clinico e la qualità di vita

# Reducing Unnecessary Hospitalizations of Nursing Home Residents

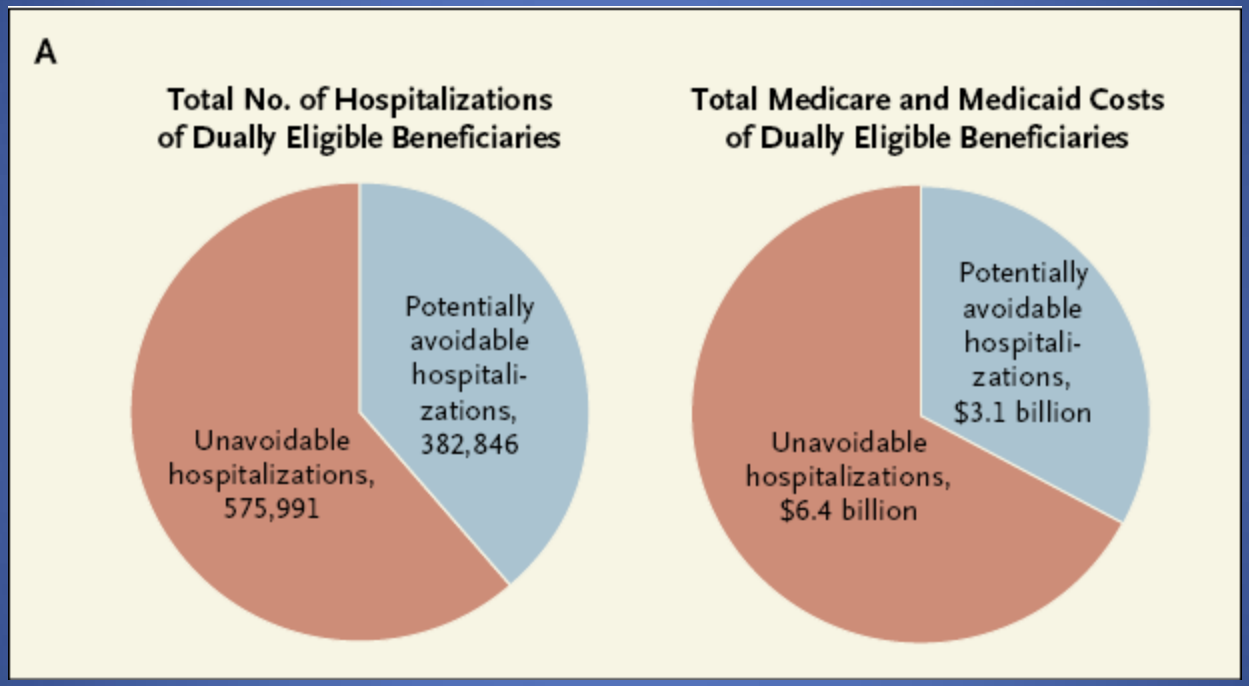
Joseph G. Ouslander, M.D., and Robert A. Berenson, M.D. N ENGL J MED 365;13 NEJM.ORG SEPTEMBER 29, 2011

L'IP notturna chiama il medico reperibile telefonicamente che non conosce bene il paziente e suggerisce l'invio in PS dove riscontrano segni vitali normali e solo un possibile infiltrato all'Rx torace. Il pz viene trattenuto e trattato con liquidi e antibiotici ev. Durante la seconda notte di degenza va incontro a un episodio di Delirium che gli procura una frattura di femore

10.000 $

L'IP notturna chiama l'IP diurna che conosce bene il pz e le comunica, sulla base di un protocollo specifico, i segni vitali, l'assenza di respiro corto, l'assenza di edemi declivi, l'assenza di grossolani rumori polmonari. Decidono insieme per un whatch and wait. Il giorno seguente, l'IP riscontra persistenza di febbre non elevata e di ronchi polmonari. Si consulta con la nipote del paziente e ordina un antibiotico orale e dei fluidi orali

200 $


A
Total No. of Hospitalizations of Dually Eligible Beneficiaries
Potentially avoidable hospitali-zations, 382,846
Unavoidable hospitalizations, 575,991
Total Medicare and Medicaid Costs of Dually Eligible Beneficiaries
Potentially avoidable hospitali-zations, $3.1 billion
Unavoidable hospitalizations, $6.4 billion

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| | PAHs | | | | | |
|---|---|---|---|---|---|---|
| | ACSCs | | ANHACs | | NHUCs | |
| | Subhazard Risk Ratio | 95% CI | Subhazard Risk Ratio | 95% CI | Subhazard Risk Ratio | 95% CI |
| Male | 1.050 | 0.995–1.109 | 1.150*** | 1.096–1.207 | 1.095*** | 1.048–1.145 |
| Age | | | | | | |
| 65–74 | — | — | — | — | — | — |
| 75–84 | 1.089* | 1.009–1.176 | 1.069 | 1.000–1.143 | 0.860*** | 0.814–0.908 |
| 85 and older | 1.196*** | 1.104–1.296 | 1.060 | 0.989–1.137 | 0.717*** | 0.676–0.761 |
| Congestive heart failure | 1.307*** | 1.230–1.388 | 1.000 | 0.943–1.060 | 0.976 | 0.923–1.031 |
| Cardiac dysrhythmia | 1.035 | 0.970–1.105 | 0.913** | 0.857–0.972 | 1.102** | 1.041–1.167 |
| Peripheral artery disease | 1.066 | 0.982–1.157 | 1.001 | 0.926–1.081 | 1.089* | 1.018–1.165 |
| Anemia | 0.965 | 0.910–1.024 | 1.059* | 1.004–1.118 | 1.036 | 0.989–1.086 |
| Urinary tract infection | 1.084* | 1.013–1.159 | 0.981 | 0.922–1.044 | 0.924* | 0.873–0.978 |
| Receiving oxygen | 1.355*** | 1.267–1.449 | 1.042 | 0.975–1.115 | 0.932* | 0.875–0.993 |
| Asthma/COPD | 1.408*** | 1.326–1.495 | 0.992 | 0.933–1.056 | 0.986 | 0.937–1.038 |
| Diabetes | 1.221*** | 1.155–1.291 | 1.065* | 1.013–1.120 | 1.069** | 1.024–1.117 |
| Renal disease | 1.077 | 0.988–1.173 | 1.141** | 1.053–1.236 | 1.131** | 1.054–1.215 |
| Serious infection | 0.950 | 0.859–1.051 | 1.220*** | 1.118–1.332 | 0.994 | 0.912–1.083 |
| Daily soft tissue pain (moderate or worse) | 1.085 | 0.898–1.310 | 1.072 | 0.911–1.261 | 0.943 | 0.798–1.115 |
| Weight loss | 0.929 | 0.863–1.001 | 0.978 | 0.916–1.044 | 0.915* | 0.859–0.974 |
| Pressure ulcer stage 2 or higher | 1.016 | 0.939–1.100 | 1.241*** | 1.160–1.328 | 0.958 | 0.893–1.026 |
| Surgical wound | 0.919 | 0.819–1.031 | 0.918 | 0.830–1.016 | 1.211*** | 1.116–1.314 |
| Bedfast | 0.860 | 0.734–1.008 | 1.071 | 0.933–1.228 | 0.859* | 0.751–0.981 |
| Walk in corridor—total dependence | 1.060 | 0.995–1.129 | 0.999 | 0.944–1.056 | 1.006 | 0.957–1.057 |
| Late loss ADL | | | | | | |
| 1–2 | — | — | — | — | — | — |
| 3–5 | 1.038 | 0.929–1.160 | 1.154** | 1.049–1.270 | 0.933 | 0.862–1.011 |
| 6–11 | 1.092 | 0.995–1.199 | 1.126* | 1.036–1.225 | 0.858*** | 0.803–0.918 |
| 12–16 | 1.098 | 0.977–1.233 | 1.226*** | 1.110–1.355 | 0.712*** | 0.652–0.777 |
| Aggressive behavior scale (ABS) | | | | | | |
| 0 | — | — | — | — | — | — |
| 1–2 | 0.860*** | 0.797–0.927 | 0.944 | 0.883–1.009 | 1.007 | 0.948–1.070 |
| 3 plus | 0.967 | 0.868–1.077 | 0.955 | 0.871–1.048 | 1.006 | 0.925–1.095 |
| Cognitive performance scale (CPS) | | | | | | |
| 0 | — | — | — | — | — | — |
| 1–3 | 0.931* | 0.867–0.999 | 1.053 | 0.984–1.127 | 0.872*** | 0.823–0.924 |
| 4–6 | 0.880* | 0.793–0.977 | 1.183*** | 1.085–1.291 | 0.799*** | 0.738–0.866 |
| Number of medications | | | | | | |
| 1–4 | — | — | — | — | — | — |
| 5–9 | 1.099 | 0.963–1.254 | 1.192** | 1.068–1.330 | 1.206*** | 1.091–1.332 |
| 10–14 | 1.241** | 1.088–1.417 | 1.329*** | 1.189–1.486 | 1.388*** | 1.253–1.537 |
| 15 plus | 1.411*** | 1.224–1.626 | 1.423*** | 1.261–1.607 | 1.376*** | 1.231–1.538 |
| Missing | 1.573*** | 1.337–1.849 | 1.628*** | 1.413–1.875 | 1.639*** | 1.442–1.864 |
| Receiving IV medication | 1.036 | 0.941–1.127 | 1.078 | 0.998–1.166 | 1.111** | 1.035–1.193 |
| Any antipsychotics | 0.947 | 0.887–1.011 | 1.040 | 0.981–1.103 | 1.026 | 0.974–1.082 |
| Any antianxiety | 1.027 | 0.959–1.099 | 0.961 | 0.903–1.022 | 1.018 | 0.963–1.077 |
| Any antidepressants | 0.959 | 0.906–1.015 | 0.991 | 0.945–1.040 | 0.961 | 0.920–1.004 |
| Any hypnotics | 1.004 | 0.916–1.100 | 1.097* | 1.008–1.194 | 1.105* | 1.029–1.186 |
| Any diuretics | 1.108*** | 1.047–1.173 | 0.963 | 0.914–1.013 | 0.976 | 0.932–1.022 |
| Urinary catheter or ostomy | 0.959 | 0.881–1.043 | 1.232*** | 1.150–1.320 | 1.213*** | 1.136–1.294 |
| Monitor acute condition or episode of recurrent/chronic problem | 0.956 | 0.897–1.020 | 1.019 | 0.967–1.075 | 1.027 | 0.979–1.078 |

(continua…)

| | PAHs | | | | | |
|---|---|---|---|---|---|---|
| | ACSCs | | ANHACs | | NHUCs | |
| | Subhazard Risk Ratio | 95% CI | Subhazard Risk Ratio | 95% CI | Subhazard Risk Ratio | 95% CI |
| Fluid intake/outtake monitoring | 0.994 | 0.924–1.070 | 0.930* | 0.874–0.990 | 0.987 | 0.933–1.044 |
| Lab values | | | | | | |
| Abnormal lab values | 1.034 | 0.968–1.105 | 1.027 | 0.971–1.087 | 1.021 | 0.971–1.073 |
| Missing lab values | 1.003 | 0.860–1.170 | 1.013 | 0.887–1.158 | 1.085 | 0.971–1.212 |
| Previous hospitalization in last 90 d | 1.304*** | 1.226–1.388 | 1.314*** | 1.247–1.384 | 1.439*** | 1.372–1.510 |
| Facility deficiency† | 1.015 | 0.967–1.066 | 1.045* | 1.006–1.086 | 1.023 | 0.989–1.059 |
| Aide hours per resident‡ | 1.049 | 0.976–1.127 | 0.978 | 0.932–1.026 | 0.983 | 0.939–1.028 |
| RN hours per resident‡ | 0.854 | 0.725–1.006 | 0.843* | 0.733–0.968 | 0.948 | 0.854–1.053 |
| Ownership | | | | | | |
| Nonprofit | — | — | — | — | — | — |
| For-profit | 1.249*** | 1.138–1.372 | 1.143*** | 1.064–1.228 | 1.097** | 1.028–1.170 |
| Government owned | 1.031 | 0.837–1.270 | 0.868 | 0.722–1.045 | 0.913 | 0.792–1.052 |
| Medicaid reimbursement‡ | 0.995*** | 0.994–0.996 | 1.000 | 0.999–1.002 | 0.999 | 0.998–1.001 |
| Medicaid case-mix reimbursement | 1.007 | 0.922–1.100 | 0.895** | 0.834–0.961 | 0.982 | 0.924–1.042 |
| Medicaid bed-hold policy | 1.084 | 0.998–1.179 | 0.962 | 0.900–1.029 | 1.067* | 1.007–1.131 |

*$P<0.05$.
**$P<0.005$.
***$P<0.001$.

- 60% di ricoveri potenzialmente evitabili
- gran parte delle ospedalizzazioni dovuta a infezioni e traumi
- i pz residenti nelle RSA for-profit sono significativamente più ospedalizzati

*Med Care* 2013;51: 673–681

# Profit e No-Profit

Economic theory suggests that for-profit facilities would provide less preventive care than nonprofit or government facilities because of profitability constraints. Profitability considerations may also result in more unavoidable hospitalizations due to the high cost of treating these residents in NHs. Consequently, for-profit facilities are more likely to have more avoidable and unavoidable hospitalizations.

La Bed-hold policy (mantenimento del letto anche quando il pz è ricoverato) è associata a un più alto tasso di ricovero ospedaliero (in generale)

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# Potentially Avoidable Hospitalizations of Dually Eligible Medicare and Medicaid Beneficiaries from Nursing Facility and Home- and Community-Based Services Waiver Programs

*Edith G. Walsh, PhD,[*] Joshua M. Wiener, PhD,[†] Susan Haber, ScD,[*] Arnold Bragg, PhD,[‡] Marc Freiman, PhD,[†] and Joseph G. Ouslander, MD[§]*

JAGS 60:821–829, 2012

Table 3. Frequency of Hospitalizations Defined as Potentially Avoidable in Dually Eligible Beneficiaries from Nursing Facilities and Medicaid Home- and Community-Based Services Waiver Programs in 2005

| Condition | Potentially Avoidable Hospitalizations | Percentage Distribution | Average Length of Stay (days) |
|---|---|---|---|
| All | 382,846 | 100.0 | 6.7 |
| Altered mental status, acute confusion, delirium | 1,777 | 0.5 | 9.5 |
| Anemia | 6,912 | 1.8 | 4.4 |
| Chronic obstructive pulmonary disease, asthma | 34,585 | 9.0 | 5.6 |
| Congestive heart failure | 62,813 | 16.4 | 6.2 |
| Constipation, impaction | 4,502 | 1.2 | 5.2 |
| Dehydration | 46,976 | 12.3 | 6.4 |
| Diarrhea, gastroenteritis, *Clostridium difficile* | 6,188 | 1.6 | 7.2 |
| Fall or trauma | 26,462 | 6.9 | 6.1 |
| Hypertension | 1,379 | 0.4 | 4.5 |
| Pneumonia | 101,357 | 26.5 | 7.6 |
| Poor glycemic control | 3,578 | 0.9 | 5.8 |
| Psychosis, agitation, organic brain syndrome | 4,125 | 1.1 | 12.9 |
| Seizures | 10,361 | 2.7 | 5.4 |
| Skin ulcers, cellulitis | 16,126 | 4.2 | 11.7 |
| Urinary tract infection | 53,551 | 14.0 | 5.8 |
| Weight loss and malnutrition | 2,154 | 0.6 | 7.7 |

Five conditions (pneumonia, congestive heart failure, urinary tract infection, dehydration, and chronic obstructive pulmonary disease or asthma) were responsible for more than three-quarters of the PAHs across settings.

Each of these five conditions is considered an ambulatory care–sensitive condition

Table 5. Estimated Reduction in Frequency and Costs of Hospitalizations Using Varying Assumptions About the Proportion of Avoidable Hospitalizations That Could Be Prevented

| Category | All Groups Combined | Beneficiaries Receiving Medicaid Nursing Facility Services | Beneficiaries Receiving Medicare Skilled Nursing Facility Services | Beneficiaries Receiving Medicaid Aged or Disabled Home- and Community-based Services Waiver Services |
|---|---|---|---|---|
| Total hospitalizations, n | 958,837 | 516,341 | 174,634 | 267,862 |
| Potentially avoidable hospitalizations, n | 382,846 | 240,753 | 73,468 | 68,625 |
| Total hospitalization costs for potentially avoidable hospitalizations (million dollars) | 3,127 | 1,927 | 738 | 463 |
| Assumption 1: 20% of hospitalizations defined as potentially avoidable actually prevented | | | | |
| Potentially avoidable hospitalizations prevented, n | 76,569 | 48,151 | 14,694 | 13,725 |
| Estimated cost savings for hospitalizations prevented (million dollars) | 625 | 385 | 148 | 93 |
| Assumption 2: 40% of hospitalizations defined as potentially avoidable actually prevented | | | | |
| Potentially avoidable hospitalizations prevented, n | 153,138 | 96,301 | 29,387 | 27,450 |
| Estimated cost savings for hospitalizations prevented (million dollars) | 1,251 | 771 | 295 | 185 |
| Assumption 3: 60% of hospitalizations defined as potentially avoidable actually prevented | | | | |
| Potentially avoidable hospitalizations prevented, n | 229,708 | 144,452 | 44,081 | 41,175 |
| Estimated cost savings for hospitalizations prevented (1,000 dollars) | 1,876 | 1,156 | 0.443 | 0.278 |

JAGS 60:821–829, 2012

# Potentially Avoidable Hospitalizations of Nursing Home Residents: Frequency, Causes, and Costs

**Obiettivo:** individuare le cause di ospedalizzazioni potenzialmente evitabili

**Setting:** 10 Nh ad alto tasso di ricovero e 10 a basso tasso

**Valutazione:** operata da esperti retrospettivamente

| Nursing Home Resident Group | Definitely or Probably Yes (%) | Definitely or Probably No (%) |
|---|---|---|
| On Medicare Part A skilled benefit at time of hospitalization (n = 94) | 69 | 31 |
| On other payment source (Medicaid, private pay, other) at time of hospitalization (n = 106) | 65 | 35 |
| Residents of high-hospitalization-rate nursing homes (n = 101)* | 75 | 25 |
| Residents of low-hospitalization-rate nursing homes (n = 99) | 59 | 41 |
| All residents (n = 200) | 67 | 33 |

JAGS 58:627–635, 2010

Table 4. Expert Panel Ratings of Factors Associated with Potentially Avoidable Hospitalizations*

| Factors Rated by Panel | Nursing Homes with High Hospitalization Rates (n = 10 Homes; 76 Potentially Avoidable Hospitalizations) | | Nursing Homes with Low Hospitalization Rates (n = 10 Homes; 58 Potentially Avoidable Hospitalizations) | | All Nursing Homes (N = 20 Homes; 134 Potentially Avoidable Hospitalizations) | |
|---|---|---|---|---|---|---|
| | Important | Somewhat Important | Important | Somewhat Important | Important | Somewhat Important |
| | n (%) | | | | | |
| The same benefits could have been achieved at a lower level of care. | 50 (66) | 20 (26) | 35 (60) | 19 (33) | 85 (63) | 39 (29) |
| The nursing home should have been able to do everything done by the hospital. | 36 (47) | 27 (36) | 31 (54) | 18 (31) | 67 (50) | 45 (34) |
| Better quality of care provided in the nursing home by the physician, nurse practitioner, or physician assistant may have prevented the transfer. | 42 (55) | 19 (25) | 31 (54) | 19 (33) | 73 (55) | 38 (28) |
| One physician visit could have avoided the transfer. | 26 (34) | 34 (45) | 24 (41) | 23 (40) | 50 (37) | 57 (43) |
| Better quality of care by nursing home staff may have prevented the transfer. | 20 (26) | 31 (41) | 12 (21) | 33 (57) | 32 (24) | 64 (48) |
| Better quality of care would have prevented or decreased severity of acute change. | 28 (37) | 25 (33) | 16 (28) | 23 (40) | 44 (33) | 48 (36) |
| Better advance care planning would have prevented the transfer. | 31 (41) | 15 (20) | 20 (35) | 17 (29) | 51 (38) | 32 (24) |
| Resident's overall condition limited his or her ability to benefit from the transfer. | 15 (20) | 21 (28) | 10 (17) | 17 (29) | 25 (19) | 38 (28) |
| Resident or family did not want hospitalization. | 4 (5) | 12 (16) | 4 (7) | 5 (9) | 8 (6) | 17 (13) |
| Family or proxy insisted on transfer. | 5 (7) | 6 (8) | 5 (9) | 5 (9) | 10 (8) | 11 (8) |

JAGS 58:627–635, 2010

Table 5. Resources that Expert Panel Rated as Potentially Helpful or Not Helpful in Preventing Avoidable Hospitalizations*

| Resources Rated | Nursing Homes with High Hospitalization Rates (N = 10 Homes; 76 Potentially Avoidable Hospitalizations) | | | Nursing Homes with Low Hospitalization Rates (N = 10 Homes; 58 Potentially Avoidable Hospitalizations) | | | All Nursing Homes (N = 20 Homes; 134 Potentially Avoidable Hospitalizations) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Prevent | Very or Somewhat Helpful | Not Helpful | Prevent | Very or Somewhat Helpful | Not Helpful | Prevent | Very or Somewhat Helpful | Not Helpful |
| Physician or physician extender present in nursing home at least 3 days per week | 13 (17) | 60 (79) | (4) | 8 (14) | 47 (81) | 3 (5) | 21 (16) | 107 (80) | 6 (4) |
| Nurse practitioner availability on a regular basis | 5 (7) | 68 (89) | 3 (4) | 5 (9) | 50 (86) | 3 (5) | 10 (7) | 118 (88) | 6 (4) |
| Examination by physician, nurse practitioner, or physician assistant within 24 hours | 34 (45) | 35 (46) | 7 (9) | 20 (34) | 35 (60) | 3 (5) | 54 (40) | 70 (52) | 10 (7) |
| Registered nurse providing care (vs a licensed practical nurse or nursing assistant) | 3 (4) | 68 (89) | 5 (7) | 5 (9) | 46 (79) | 7 (12) | 8 (6) | 114 (85) | 12 (9) |
| Availability of laboratory tests within 3 hours | 12 (16) | 57 (75) | 7 (9) | 8 (14) | 42 (72) | 8 (14) | 20 (15) | 99 (74) | 15 (11) |
| Intravenous therapy | 16 (21) | 45 (59) | 15 (20) | 14 (24) | 33 (57) | 11 (19) | 30 (22) | 78 (58) | 26 (19) |
| Pulse oximetry | 1 (1) | 44 (58) | 31 (41) | 2 (3) | 34 (59) | 22 (38) | 3 (2) | 78 (58) | 53 (40) |
| Respiratory therapy | 1 (1) | 28 (37) | 47 (62) | 7 (12) | 24 (41) | 27 (47) | 8 (6) | 52 (39) | 74 (55) |
| Psychiatric consultation | 0 (0) | 9 (12) | 67 (88) | 0 (0) | 8 (14) | 50 (86) | 0 (0) | 17 (13) | 117 (87) |
| Blood products | 4 (5) | 6 (8) | 66 (87) | 2 (3) | 4 (7) | 52 (90) | 6 (4) | 10 (7) | 118 (88) |
| Total parenteral nutrition | 0 (0) | 7 (9) | 69 (91) | 0 (0) | 2 (3) | 56 (97) | 0 (0) | 9 (7) | 125 (93) |
| Patient-controlled analgesic pumps | 1 (1) | 5 (7) | 70 (92) | 0 (0) | 4 (7) | 54 (93) | 1 (1) | 9 (7) | 124 (93) |

JAGS 58:627–635, 2010

These findings suggest that NHs may reduce hospitalizations through improvements in infection control and falls prevention and better management of medications and pressure ulcers and highlights the importance of not relying on an ambulatory-sensitive definition of avoidable hospitalizations but using an NH-sensitive definition.

staff and expertise to their care teams.[48] Nevertheless, this study suggests that the ability to reduce avoidable hospitalizations from NHs will depend on what happens on the front line. It will involve targeting resources so that NH direct care staff improve infection control, better prevent and manage pressure ulcers, prevent infections for residents with internal devices, manage infections so they do not progress to sepsis, manage medications, and prevent injurious falls.

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# Hospitalizations of Nursing Home Residents in the Last Year of Life: Nursing Home Characteristics and Variation in Potentially Avoidable Hospitalizations

JAGS 61:1900–1908, 2013

L'ospedalizzazione risulta più frequente nel periodo antecedente alla morte (dal 25 al 46% dei residenti sono ospedalizzati tra negli ultimi 6-12 mesi di vita)

Questo dipende da:

- scarso controllo del dolore
- eccessive aspettative nei confronti dell'ospedale
- uso non adeguato dell'hospice
- scarsa attenzione alla pianificazione del management dei pazienti

Il 53% dei pazienti deceduti nel 2007 ha subito un ricovero durante l'ultimo anno di vita e circa un terzo dei ricoveri totali è stato classificato come PAH, assorbendo il 41% della spesa ospedaliera per il settore

Table 2. Hospitalizations, Potentially Avoidable Hospitalizations (PAHs), and Estimated Medicare Cost Associated with Different Scenarios of PAH Reductions: For Nursing Home Residents in the Last Year of Life

| Summary Statistic | All Hospitalizations, N = 295,929 | PAHs, n = 143,058 | Estimated PAH Reduction 20%, n = 28,612 | 40%, n = 57,223 | 60%, n = 85,835 |
|---|---|---|---|---|---|
| Residents having at least one hospitalization, % | 53.3 | 33.4 | | | |
| Hospitalizations per 1,000 person-years | 1,243 | 601 | | | |
| Total Medicare expenditure, $2007, in millions | 2,386 | 9.72 | 194 | 389 | 583 |
| Average length of stay, days | 6.45 | 6.09 | | | |
| Average Medicare expenditure per hospitalization, $2007 | 8,064 | 6,793 | | | |

JAGS 61:1900–1908, 2013

Fattori modificabili in NH: infermiere o medico in sede; incremento delle ore dedicate a ogni pz; possibilità di eseguire RX in sede;

| Facility Characteristic | Value | Logistic Regression Model | |
|---|---|---|---|
| | | Odds Ratio (95% Confidence Interval) | *P*-Value |
| For-profit, % | 69.5 | 1.20 (1.09–1.32)** | <.001 |
| Chain, % | 55.8 | 0.90 (0.83–0.97)** | .01 |
| Number of certified beds, mean ± SD | 119 ± 64 | 1.00 (1.00–1.00) | .72 |
| Hospital based, % | 4.6 | 0.59 (0.47–0.73)** | <.001 |
| Total staffing, hours per resident per day, mean ± SD | 3.30 ± 1.01 | 0.94 (0.90–0.99)* | .02 |
| RN to LPN + CNA ratio, mean ± SD, (OR: per 10% increase) | 0.11 ± 0.15 | 0.92 (0.88–0.97)** | .001 |
| Occupancy rate, mean ± SD, (OR: per 10% increase) | 0.86 ± 0.12 | 0.97 (0.93–1.00) | .08 |
| Percentage of Medicaid recipients, mean ± SD, (OR: per 10% increase) | 0.61 ± 0.19 | 1.20 (1.16–1.23)** | <.001 |
| Percentage of Medicare recipients, mean ± SD, (OR: per 10% increase) | 0.14 ± 0.12 | 1.30 (1.24–1.36)** | <.001 |
| Rural, % | 14.5 | 1.47 (1.30–1.67)** | <.001 |
| X-ray onsite, % | 76.5 | 0.86 (0.76–0.97)* | .02 |
| Clinical laboratory onsite, % | 76.2 | 1.11 (1.00–1.24) | .06 |
| Nurse practitioners and physician assistants, % | 31.2 | 0.91 (0.84–0.99)* | .03 |
| Number of hospital beds per 1,000 population aged ≥65, mean ± SD | 22.1 ± 16.3 | 1.00 (1.00–1.01)** | <.001 |

*$P < .05$, **$P \leq .01$.

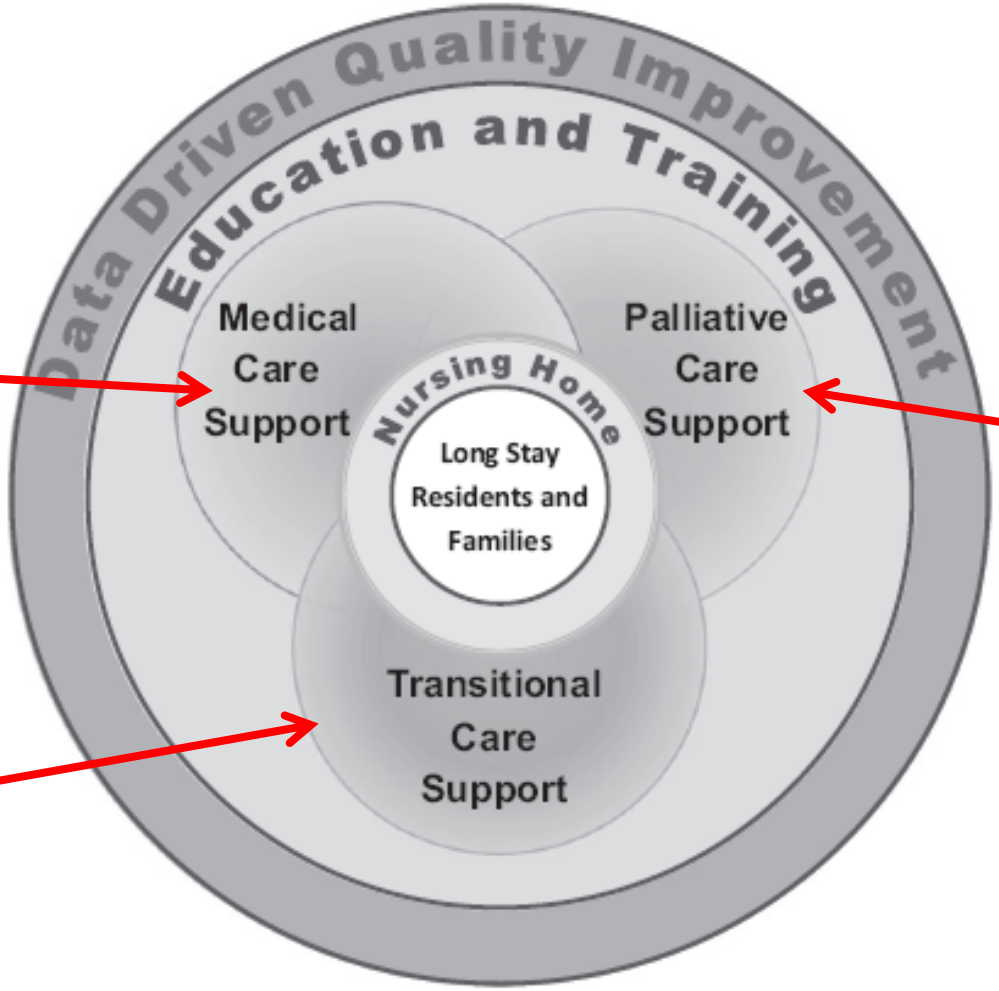
Although a number of modifiable NH characteristics appear to be associated with PAH rates, reductions in PAHs continue to be challenging in this care setting, particularly because facilities have no clear incentives not to hospitalize.

JAGS 61:1900–1908, 2013

1. Che cosa sono i ricoveri potenzialmente evitabili?
2. Perchè è importante ridurre il loro numero?
3. Quali sono le strategie suggerite dalla letteratura internazionale?

Migliorare individuazione precoce e gestione delle riacutizzazioni

Migliorare passaggio informazioni RSA-ospedale




| | | |
|---|---|---|
| Long Stay Residents and Families | are | residents who are enrolled as OPTIMISTIC participants and their families |
| Nursing Home | includes | OPTIMISTIC staff, facility staff and primary care providers in the participating facility |
| Medical, Palliative and Transitional Care | are | the core foci of quality improvement for OPTIMISTIC |
| Education and Training | is | a key feature of OPTIMISTIC providing support to the staff for the many roles they serve; facility staff and primary care providers are included in relevant aspects |
| Data Driven Quality Improvement | means | all activities of the OPTIMISTIC project are informed by data |

Migliorare il trattamento del dolore e la comuncazione con i familiari

JAGS 63:165–169, 2015

| Characteristic | n (%) |
|---|---|
| Risk factors in advance of transfer | |
| Hospitalization in last 30 days | 207 (23) |
| Hospitalization in last 6 months | 412 (45) |
| Heart failure | 267 (29) |
| Dementia with behavioral problems | 261 (29) |
| Chronic obstructive pulmonary disease | 234 (26) |
| Dose change or new medication (within 48 hours of transfer) | 126 (14) |
| Surgery in last 3 months | 44 (5) |
| Stroke in last 3 months | 12 (1) |
| Cancer, on active chemo or radiation therapy | 12 (1) |
| One or more opportunities for quality improvement identified | 493 (54) |
| Opportunities | |
| Condition might have been managed safely in facility with available resources | 213 (23) |
| Changes in resident's condition might have been communicated better | 184 (20) |
| New sign could have been detected earlier | 169 (19) |
| Resident and family preferences for hospitalization might have been discussed earlier | 129 (14) |
| Advance directives or palliative or hospice care might have been put in place earlier | 127 (14) |
| Resources were not available to manage change in condition safely or effectively | 242 (27) |
| Resources that were not available | |
| Laboratory or diagnostic test | 130 (14) |
| On-site primary care | 109 (12) |
| Communication with specialist | 18 (2) |
| Staffing | 18 (2) |
| Pharmacy services | 10 (1) |
| Transfer back to this facility | 688 (76) |
| Information provided by hospital | |
| Discharge summary | 546 (79) |
| Discharge diagnosis | 591 (86) |
| Current medications | 586 (85) |
| Relevant hospital or surgical course | 516 (75) |
| Relevant comorbidities | 494 (72) |
| Code status | 353 (51) |
| Call-back information | 204 (28) |

**Possibilità di prevenzione**

JAGS 63:165–169, 2015

The success of the overall initiative will be measured primarily by reduction in avoidable hospitalizations of long-stay nursing facility residents, which will be achieved through better use of communication tools, standardized care pathways, enhanced geriatric care, and comprehensive advance care planning.

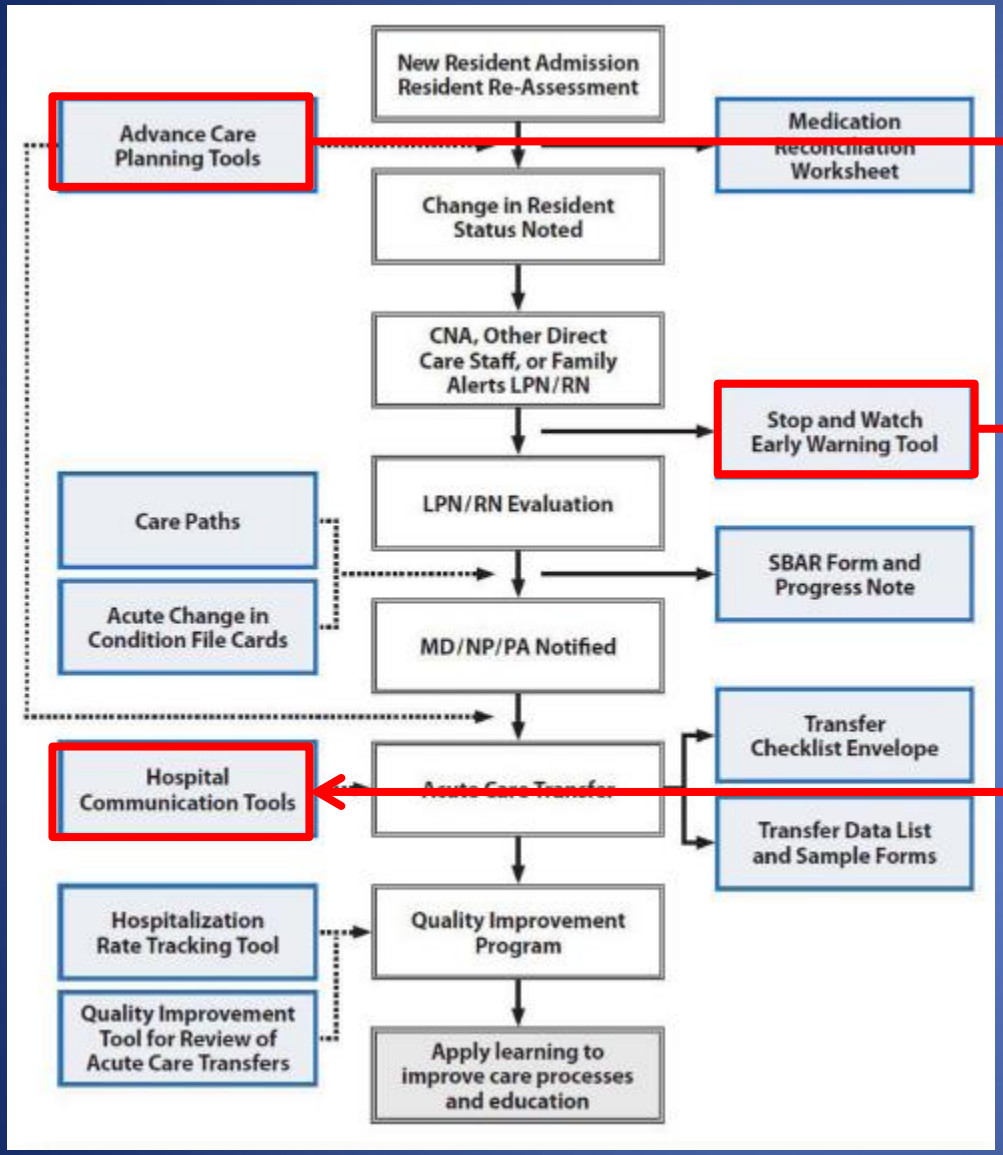
JAGS 63:165–169, 2015

*J Am Med Dir Assoc*. 2014 March ; 15(3): 162–170. doi:10.1016/j.jamda.2013.12.005.

# The INTERACT Quality Improvement Program: An Overview for Medical Directors and Primary Care Clinicians in Long-Term Care

**Programma di miglioramento qualitativo orientato a ridurre i trasferimenti per riacutizzazioni**

1. *Principles of quality improvement*, including implementation by a team facilitated by a designated champion and strong leadership support; measurement, tracking, and benchmarking of clearly defined outcomes with feedback to all staff; and root cause analyses of hospitalizations with continuous learning and improvement based on them.
2. *Early identification and evaluation of changes in condition* before they become severe enough to require hospital transfer.
3. *Management of common changes in condition* when safe and feasible without hospital transfer.
4. *Improved advance care planning* and use of palliative or hospice care when appropriate and the choice of the resident (or their health care proxy) as an alternative to hospitalization.
5. *Improved communication and documentation* – both within the nursing home, between the nursing home staff and families, and between the nursing home and the hospital.




Pianificazione e discussione di cosa comporterebbe l'ospedalizzazione per riacutizzazione per ogni pz

Deriva da una capacità di individuare precocemente i sintomi

Dipende da un miglioramento della comunicazione nella stessa RSA e tra RSA e ospedale

*J Am Med Dir Assoc*. 2014 March

# Interventions to Reduce Hospitalizations from Nursing Homes: Evaluation of the INTERACT II Collaborative Quality Improvement Project

JAGS 59:745–753, 2011

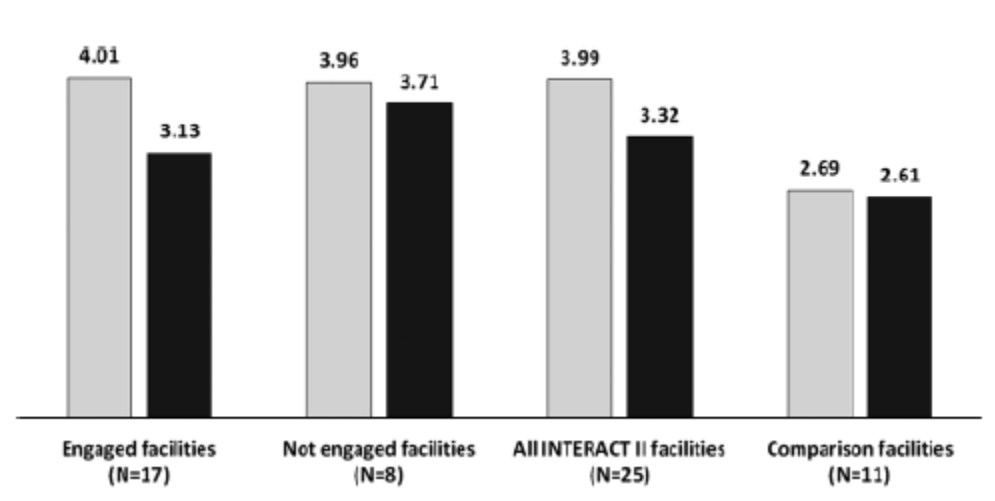



Table 3. Absolute and Relative Changes in Hospitalization Rates*

| Facilities† | Hospitalization Rate per 1,000 Resident Days, Mean ± SD: Before Intervention | During Intervention | Change, Mean ± SD | 95% Confidence Interval | *P*-Value | Reduction, % |
|---|---|---|---|---|---|---|
| Engaged facilities (n = 17) | 4.01 ± 2.56 | 3.13 ± 2.27 | −0.90 ± 1.28 | −0.23 to −1.56 | .01 | 24 |
| Not engaged facilities (n = 8) | 3.96 ± 1.79 | 3.71 ± 1.53 | −0.26 ± 1.83 | −1.79 to 1.27 | .69 | 6 |
| All participating facilities (n = 25) | 3.99 ± 2.30 | 3.32 ± 2.04 | −0.69 ± 1.47 | −0.08 to −1.30 | .02 | 17 |
| Comparison facilities (n = 11) | 2.69 ± 2.23 | 2.61 ± 1.82 | −0.08 ± 0.74 | −0.41 to 0.58 | .72 | 3 |

| INTERACT II Components | Description |
|---|---|
| Orientation and support | |
| Leadership education | Corporate and facility leadership participated in in-person and telephone meetings describing project goals and expectations. The NH administrator received a nonbinding letter of agreement. |
| Facility champion | Each NH appointed a "champion" for the project responsible for ongoing staff education and implementation of the INTERACT II intervention. |
| Nursing home staff education | Staff at each facility attended a 4- to 6-hour orientation to INTERACT II conducted by the project team members. |
| Collaborative telephone conference calls | Conference calls facilitated by the senior project coordinator were held every 2 weeks with facility champions (up to 10 at a time). Calls were used to discuss progress on project implementation, successes, barriers, and case examples. |
| Tools | |
| Communication tools | |
| Early warning tool ("Stop and Watch") | Pocket card and half-page report forms for certified nursing assistants to:<br>■ Identify changes in residents under their care<br>■ Report changes to licensed nurses |
| Situation-Background-Assessment-Recommendation communication tool and progress note | Progress note templates for licensed nursing staff to:<br>■ Evaluate and communicate acute changes<br>■ Document evaluation and communications |
| Change in condition file cards | Laminated resource cards for licensed nursing staff to:<br>■ Identify critical vital signs and laboratory results<br>■ Guide when to communicate acute changes in status to doctor, NP, or PA |
| Resident transfer forms | Template forms for all nursing home and emergency room staff to:<br>■ Communicate and document critical clinical and administrative information at the time of transfer |
| Acute care transfer envelope with checklist | Envelopes for transfer documents with a checklist of recommended items stamped on the outside to:<br>Ensure necessary documents are transferred<br>Organize the transfer documents<br>Document what was transferred |
| Care Paths | |
| Mental status change<br>Fever<br>Symptoms of lower respiratory infection<br>Symptoms of congestive heart failure<br>Symptoms of urinary tract infection<br>Dehydration | Posters and individual 8.5" by 11" pages for licensed nursing staff, administrative nurses, medical director, primary care physicians, nurse practitioners, physician assistants to:<br>■ Guide evaluation of specific symptoms that commonly precipitate acute care transfers<br>■ Identify criteria for immediate notification and consideration of acute care transfer<br>■ Provide options to manage conditions in the NH |
| Advance care planning tools | |
| Identifying residents to consider for palliative care and hospice | Pocket card for all staff to:<br>■ Guide how to identify residents who may be appropriate for a palliative or comfort care plan or hospice care |
| Advance care planning communication guide | Laminated bound cards for social workers, licensed nurses, doctors, NPs, PAs to:<br>■ Guide communication with residents and family members for residents for whom a palliative or comfort care plan or hospice care would be appropriate |
| Comfort care order set | Laminated cards for doctors, NPs, PAs, licensed nurses to assist with guidance on examples of orders that may be appropriate for residents on palliative or comfort care plans |
| Acute care transfer reviews (quality improvement analysis) | Printed forms for NH administrative staff to assist with quality improvement to review acute care transfers, assess what was done, and determine whether anything could have been done to avoid the transfer |

# Conclusioni

Despite these limitations, potentially avoidable hospitalizations of NH residents appear to represent an opportunity to improve the quality of NH care and lower healthcare expenditures. To achieve these goals, infrastructure in NHs to manage sicker residents safely must be supported; strategies and tools must be further developed and disseminated that are helpful to NH professionals in their everyday assessment, management, and communication about residents with acute changes in condition; the amount of medically futile care must be reduced; and adequate financial and other incentives must be provided that will motivate NHs, physicians, and acute care hospitals to reduce potentially avoidable hospitalizations.

Il ricovero inappropriato può dipendere dalla scarsa capacità del personale nel discriminare tra priorità assoluta e demandabile, ma molto più spesso dipende dall'incapacità o dalla scarsa volontà di chi dirige la struttura nel mettere in atto una serie di misure preventive adeguate

JAGS 58:627–635, 2010