



**Forum Risk Management**

obiettivo sanità salute

**26-29 NOVEMBRE 2024**  
**AREZZO FIERE E CONGRESSI**

**19**

# Il Comanagement Medico Chirurgico: documento multisocietario

Francesco Dentali

Dipartimento di Area Medica, ASST Settelaghi

Università dell'Insubria, Varese.

***Il sottoscritto Francesco Dentali***

*ai sensi dell'art. 3.3 sul Conflitto di Interessi, pag. 17 del Reg. Applicativo dell'Accordo Stato-Regione del 5 novembre 2009,*

DICHIARA

*che negli ultimi due anni NON ha avuto rapporti diretti di finanziamento con soggetti portatori di interessi commerciali in campo sanitario*

*che negli ultimi due anni ha avuto rapporti diretti di finanziamento con i seguenti soggetti portatori di interessi commerciali in campo sanitario:*

- *BMS/Pfizer*
- *Bayer*
- *Boehringer*
- *Daiichi*
- *IL*
- *Alfa Wasserman*
- *Sanofi*
- *Astra Zeneca*



## La medicina interna nell'assistenza del paziente chirurgico complesso

Marco Fabbri,<sup>1</sup> Simone Galli,<sup>2</sup> Alessandro Morettini<sup>1</sup>

---

### Modelli di cura

**Consulenza medica perioperatoria**

***Comanagement* medico-chirurgico**

**Reparto di Medicina Interna Perioperatoria**

# Principles of Effective Consultation

## *An Update for the 21st-Century Consultant*

### Modified Ten Commandments for Effective Consultations

1983 Commandments*		2006 Modifications	
Commandment	Meaning	Commandment	Meaning
1. Determine the question	The consultant should call the primary physician if the specific question is not obvious	1. Determine your customer	Ask the requesting physician how you can best help them if a specific question is not obvious; they may want comanagement
2. Establish urgency	The consultant must determine whether the consultation is emergent, urgent, or elective	2. Establish urgency	The consultant must determine whether the consultation is emergent, urgent, or elective
3. Look for yourself	Consultants are most effective when they are willing to gather data on their own	3. Look for yourself	Consultants are most effective when they are willing to gather data on their own
4. Be as brief as appropriate	The consultant need not repeat in full detail the data that were already recorded	4. Be as brief as appropriate	The consultant need not repeat in full detail the data that were already recorded
5. Be specific	Leaving a long list of suggestions may decrease the likelihood that any of them will be followed, including the critical ones	5. Be specific, thorough, and descend from thy ivory tower to help when requested	Leave as many specific recommendations as needed to answer the consult but ask the requesting physician if they need help with order writing
6. Provide contingency plans	Consultants should anticipate potential problems; a brief description of therapeutic options may save time later	6. Provide contingency plans and discuss their execution	Consultants should anticipate potential problems, document contingency plans, and provide a 24-h point of contact to help execute the plans if requested
7. Thou shalt not covet thy neighbor's turf	In most cases, consultants should play a subsidiary role	7. Thou may negotiate joint title to thy neighbor's turf	Consultants can and should comanage any facet of patient care that the requesting physician desires; a frank discussion defining which specialty is responsible for what aspects of patient care is needed
8. Teach with tact	Requesting physicians appreciate consultants who make an active effort to share their expertise	8. Teach with tact and pragmatism	Judgments on leaving references should be tailored to the requesting physician's specialty, level of training, and urgency of the consult
9. Talk is cheap and effective	There is no substitute for direct personal contact with the primary physician	9. Talk is essential	There is no substitute for direct personal contact with the primary physician
10. Provide appropriate follow-up	Consultants should recognize the appropriate time to fade into a background role, but that time is almost never the same day the consultation note is signed	10. Follow-up daily	Daily written follow-up is desirable; when the patient's problems are not active, the consultant should discuss signing-off with the requesting physician beforehand

Salerno et al; Arch Int Med 2007





**Forum Risk Management**

obiettivo sanità salute

**26-29 NOVEMBRE 2024**  
**AREZZO FIERE E CONGRESSI**

**19**

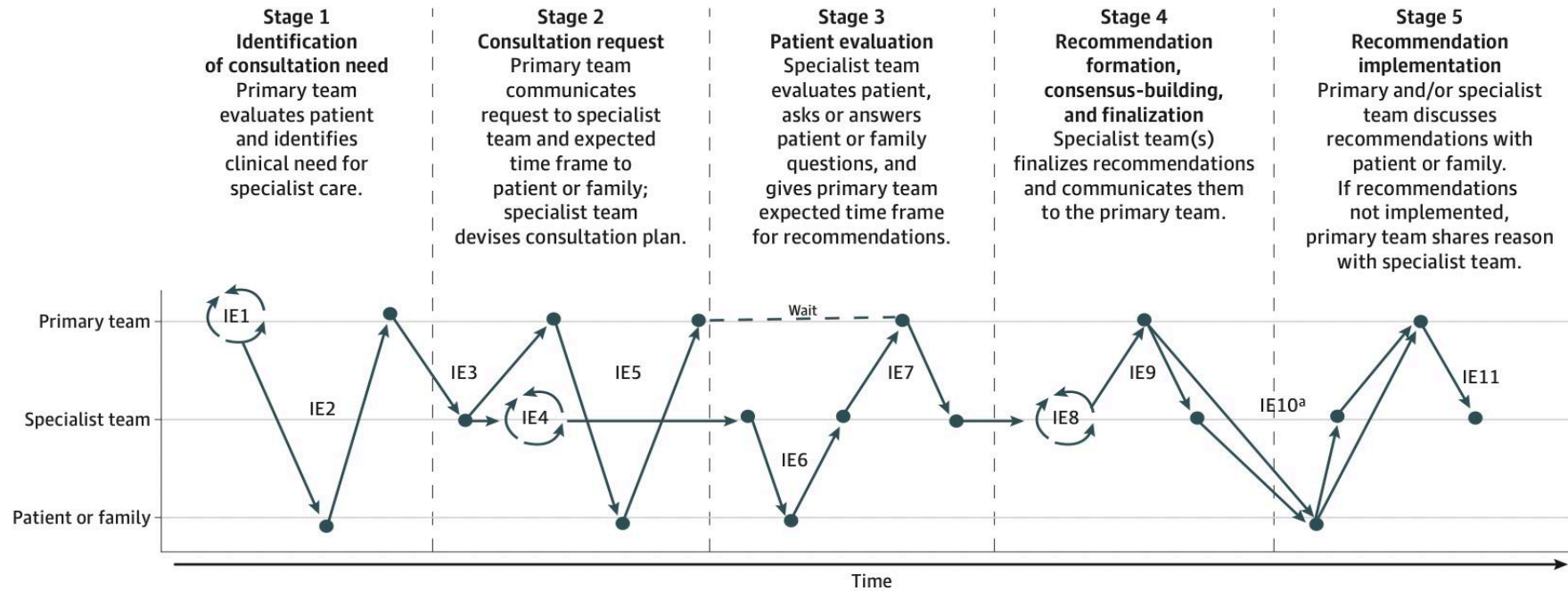
## **Studies Assessing the Efficacy of Consultation in Surgical Patients in improving Clinical Outcomes** Systematic Research and Meta-Analysis of the Literature

- 
- 
- 
-

Original Investigation | Health Policy

# Patient and Clinician Perceptions of Factors Relevant to Ideal Specialty Consultations

Primary Information Exchanges (IE) Among Interactants During an Ideal Consultation



Roche et al; JAMA Network Open 2020



I.N. Grant A.S. Dixon

## “Thank You for Seeing This Patient”: Studying the Quality of Communication between Physicians

### SUMMARY

Communication between physicians about patients was examined in a pilot study when 15 family physicians and specialists were asked to describe the most recent consultation in which they had been involved. In 40% of the consultations discussed the communication seemed to have been clear, and both physicians involved were satisfied with the process; but in 40% communication was confused, and in the remaining 20% outright conflict was identified. Skillful communication between physicians may be important to ensure optimal patient care, and the study revealed some barriers to effective consultations. (*Can Fam Physician* 1987; 33:605–611.)

### SOMMAIRE

La communication entre les médecins au sujet de leurs patients a fait l'objet d'une étude pilote alors qu'on a demandé à 15 médecins de famille et spécialistes de décrire la dernière consultation où ils avaient été impliqués. Dans 40% des consultations étudiées, la communication semble avoir été claire, et les deux médecins impliqués furent satisfaits du processus; mais dans un autre 40%, la communication fut nébuleuse alors que dans le dernier 20% on a identifié des conflits. Les habiletés de communication entre les médecins peuvent s'avérer importantes afin d'optimiser les soins au patient. Cette étude a permis de mettre en évidence certaines barrières qui nuisent à l'efficacité de la consultation.





# Compliance with the Recommendations of Medical Consultants

Compliance According to the Number of Recommendations\*

Patient Group	Number of Recommendations		
	≤ 5	≥ 6	Total
A. Not ill or moderately ill ≤ 2 problems	68% (90)†	62% (19)	67% (109)
B. Not ill or moderately ill ≥ 3 problems	75% (73)	77% (39)	75% (112)
C. Severely ill	78% (13)	87% (9)	81% (22)
<b>TOTAL</b>	<b>72%</b> <b>(176)</b>	<b>74%</b> <b>(67)</b>	<b>72%</b> <b>(243)</b>

Perry Ballard et al; J Gen Int Med 1986



## Compliance with the Recommendations of Medical Consultants

Compliance According to Patient Characteristics and Type of Recommendation

Patient Group	Recommended Medications	Recommended Diagnostic Tests	Recommendations to be Carried out by Physician	Recommendations to be Carried out by Nursing Staff
A. Not ill or moderately ill ≤ 2 problems	76% (70)*	55% (68)	72% (52)	61% (45)
B. Not ill or moderately ill ≥ 3 problems	89% (89)	64% (86)	79% (73)	69% (63)
C. Severely ill	88% (20)	79% (17)	73% (13)	70% (9)
TOTAL	84% (179)	62% (171)	76% (138)	66% (117)

Compliance According to Surgeon's Assessment of Quality

Patient Group	Essential Non-insulting Recommendations	Essential but Insulting Recommendations	"O.K." Recommendations	Total
Not ill or moderately ill ≤ 2 problems	69% (100)	71% (30)	43% (22)	67% (109)
Not ill or moderately ill ≤ 3 problems	77% (111)	81% (40)	44% (24)	75% (112)
Severely ill	83% (22)	85% (10)	50% (5)	81% (22)
TOTAL	74% (233)	77% (80)	44% (51)	72% (243)

## Evaluation of Internal Medicine Physician or Multidisciplinary Team Comanagement of Surgical Patients and Clinical Outcomes A Systematic Review and Meta-analysis

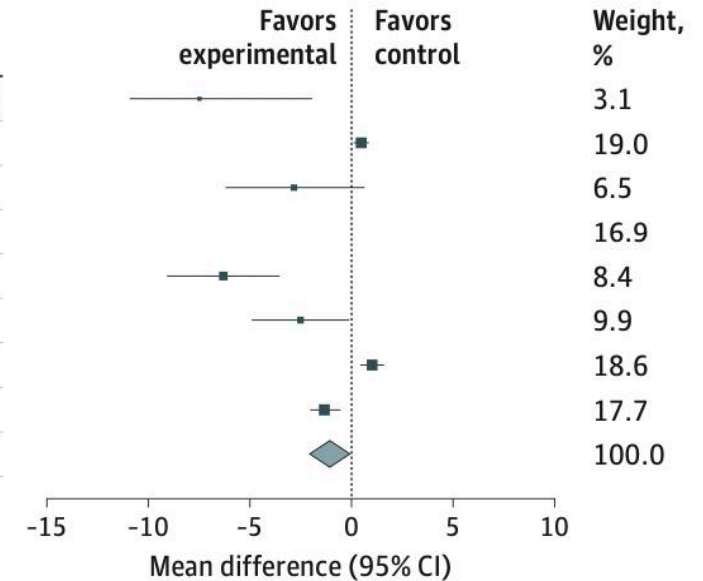
Original Investigation | Health Policy

**A** Unadjusted length of stay

Study or subgroup	Intervention		Comparator		Mean difference (95% CI)
	Mean (SD) d	Total	Mean (SD) d	Total	
Macpherson, <sup>28</sup> 1994	19.7 (18.2)	79	27.2 (18.2)	86	-7.50 (-13.06 to -1.94)
Salottolo, <sup>23</sup> 2009	4.15 (2.04)	261	3.64 (1.91)	239	0.51 (0.16 to 0.86)
Della Rocca, <sup>38</sup> 2013	7.1 (4.33)	115	9.9 (9.41)	31	-2.80 (-6.21 to 0.61)
Montero Ruiz, <sup>30</sup> 2015	3.5 (9.05)	642	2.8 (9.62)	987	0.70 (-0.22 to 1.62)
Soong, <sup>33</sup> 2016	11.9 (13.7)	331	18.2 (18.4)	240	-6.30 (-9.06 to -3.54)
Noticewala, <sup>25</sup> 2016	8.2 (4.1)	129	10.7 (13.6)	138	-2.50 (-4.88 to -0.12)
Iberti, <sup>27</sup> 2016	6.1 (6.17)	1487	5.1 (6.17)	944	1.00 (0.50 to 1.50)
Rohatgi, <sup>37</sup> 2018	6.3 (8.3)	1062	7.6 (8.5)	938	-1.30 (-2.04 to -0.56)
<b>Total</b>		<b>4106</b>		<b>3603</b>	<b>-1.02 (-2.09 to 0.04)</b>

Heterogeneity:  $\tau^2 = 1.53$ ;  $\chi^2 = 65.71$ ;  $P < .001$ ;  $I^2 = 89\%$

Test for overall effect:  $z = 1.88$ ;  $P = .06$

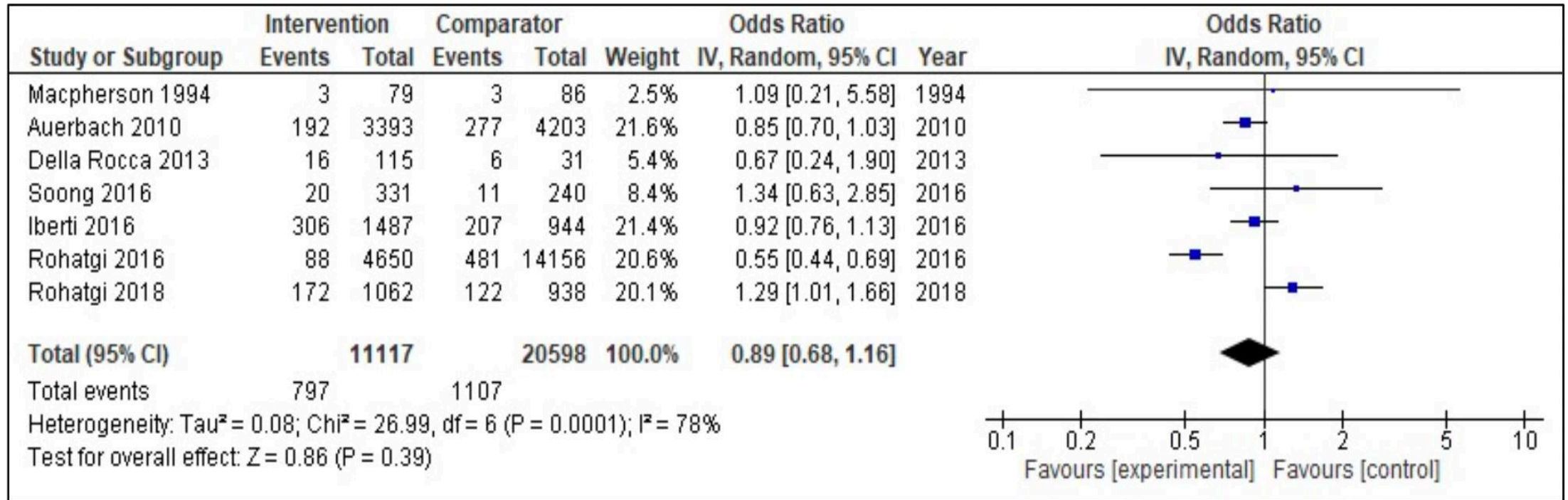


Shaw et al; JAMA Open 2020

**Evaluation of Internal Medicine Physician or Multidisciplinary Team  
 Comanagement of Surgical Patients and Clinical Outcomes**  
 A Systematic Review and Meta-analysis

Original Investigation | Health Policy

**30 Day Readmissions**



Shaw et al; JAMA Open 2020





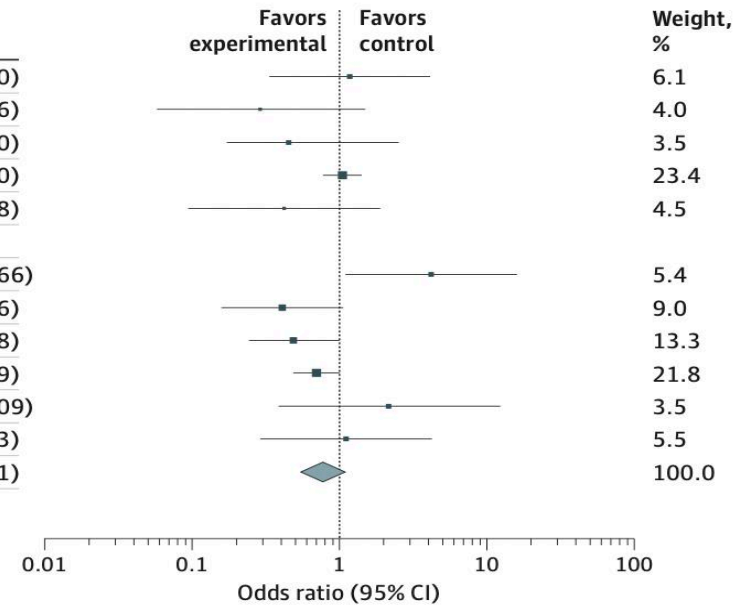
# Evaluation of Internal Medicine Physician or Multidisciplinary Team Comanagement of Surgical Patients and Clinical Outcomes A Systematic Review and Meta-analysis

Original Investigation | Health Policy

## In-hospital Mortality

Study or subgroup	Intervention		Comparator		Odds Ratio (95% CI)
	Events	Total	Events	Total	
Zuckerman, <sup>36</sup> 1992	25	431	3	60	1.17 (0.34-4.00)
Macpherson, <sup>28</sup> 1994	2	79	7	86	0.29 (0.06-1.46)
Salottolo, <sup>23</sup> 2009	2	261	4	239	0.45 (0.08-2.50)
Auerbach, <sup>26</sup> 2010	88	3393	104	4203	1.05 (0.79-1.40)
Della Rocca, <sup>38</sup> 2013	5	115	3	31	0.42 (0.10-1.88)
Montero Ruiz, <sup>29</sup> 2015	0	244	0	345	Not estimable
Montero Ruiz, <sup>30</sup> 2015	8	642	3	987	4.14 (1.09-15.66)
Soong, <sup>33</sup> 2016	7	331	12	240	0.41 (0.16-1.06)
Iberti, <sup>27</sup> 2016	15	1487	19	944	0.50 (0.25-0.98)
Rohatgi, <sup>32</sup> 2016	40	4650	173	14156	0.70 (0.50-0.99)
Noticewala, <sup>25</sup> 2016	4	129	2	138	2.18 (0.39-12.09)
Rohatgi, <sup>37</sup> 2018	5	1062	4	938	1.10 (0.30-4.13)
Total	201	12824	334	22367	0.79 (0.56-1.11)

Heterogeneity:  $\tau^2 = 0.11$ ;  $\chi^2_{10} = 17.95$ ;  $P = .06$ ;  $I^2 = 44\%$   
Test for overall effect:  $z = 1.34$ ;  $P = .18$

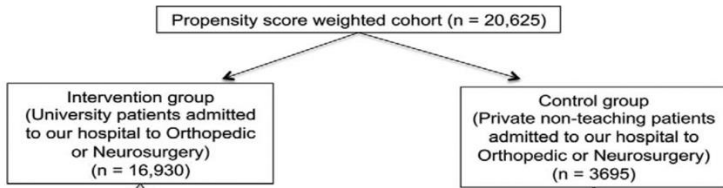


Shaw et al; JAMA Open 2020



# Surgical Comanagement by Hospitalists Improves Patient Outcomes

## Changes in the Outcomes



Adjusted Rates and Odds ratios (n = 20,625)

Outcome, %	Intervention Group (n = 16,930)			Control Group (n = 3695)			Difference-in-difference Odds Ratios for Effect of the SCM Intervention*	Difference-in-difference P value for the Effect of the SCM Intervention*
	Rate			Rate				
	Pre, % (n = 12,740)	Post, % (n = 4190)	Odds Ratio (95% CI)*	Pre, % (n = 2830)	Post, % (n = 865)	Odds Ratio (95% CI)*		
Patients with >1 medical complication <sup>†</sup>	9.5	8.0	0.83 (0.70–0.95)	9.1	9.0	0.98 (0.91–1.08)	0.86 (0.74–0.96)	0.008
Patients with LOS >5 d	28.4	21.2	0.72 (0.59–0.91)	27.1	26.0	0.93 (0.69–1.19)	0.75 (0.67–0.84)	<0.001
30-d readmission for medical cause	3.0	1.8	0.63 (0.54–0.90)	1.9	1.8	0.97 (0.88–1.09)	0.67 (0.52–0.81)	<0.001
Patients with >2 medical consultants	14.5	8.8	0.59 (0.50–0.67)	12.7	12.9	1.02 (0.89–1.16)	0.55 (0.49–0.63)	<0.001
Patient satisfaction (top-box) <sup>‡</sup>	89.0	92.9	1.05 (0.86–1.27)	89.5	90.8	1.02 (0.87–1.21)	1.08 (0.87–1.33)	0.507

\*All analyses compare pre-to-post differences (pre represents January 2009–July 2012, before SCM model; post represents September 2012–September 2013) between intervention and control groups. All models were adjusted for age, sex, race, marital/partner status, annual income, primary insurance, medical history, case mix index, Charlson comorbidity index, ASA score, surgical department, surgical diagnoses-related group, elective or emergent surgery, general or regional anesthesia, operating time, patient's admit source, and the place of discharge.

<sup>†</sup>Medical complication: sepsis, pneumonia, urinary tract infections, delirium, acute kidney injury, atrial fibrillation, or ileus.

<sup>‡</sup>Patient satisfaction survey response rates were 24.9% and 27.8%, respectively, in the pre and postintervention groups, and 24.1% and 32.8%, respectively, in the pre and postcontrol groups.

# Surgical Comanagement by Hospitalists Improves Patient Outcomes

## Subgroup Analyses

	>1 Medical Complication				LOS >5 d			
	Unadjusted Mean, %	Intervention: Adjusted Odds Ratio for Post (95% CI)	Control: Adjusted Odds Ratio for Post (95% CI)	Difference-in-difference P value for the Effect of the SCM Intervention	Unadjusted Mean, %	Intervention: Adjusted Odds Ratio for Post (95% CI)	Control: Adjusted Odds Ratio for Post (95% CI)	Difference-in-difference P value for the Effect of the SCM Intervention
Full sample (N = 22,590)	9.3	0.80 (0.65–1.06)	0.95 (0.73–1.19)	0.077	29.9	0.67 (0.55–0.91)	0.81 (0.60–1.03)	<0.001
Trimmed sample (n = 20,625)	9.2	0.83 (0.70–0.95)	0.98 (0.91–1.08)	0.008	26.8	0.72 (0.59–0.91)	0.93 (0.69–1.19)	<0.001
Propensity score, stratified by median								
<0.687 (n = 10,312)	9.1	0.84 (0.73–0.94)	0.99 (0.93–1.14)	0.006	21.1	0.76 (0.68–0.93)	0.95 (0.82–1.16)	<0.001
>0.687 (n = 10,313)	9.4	0.82 (0.65–0.98)	0.97 (0.90–1.05)	0.002	32.5	0.69 (0.57–0.90)	0.90 (0.68–1.20)	<0.001
Age, y								
<65 (n = 11,712)	8.9	0.80 (0.74–0.86)	1.00 (0.72–1.37)	<0.001	25.3	0.71 (0.59–0.94)	0.93 (0.69–1.29)	<0.001
>65 (n = 8913)	9.8	0.87 (0.80–0.95)	0.96 (0.89–1.04)	0.007	28.8	0.74 (0.68–0.85)	0.92 (0.86–1.06)	<0.001
Annual income, USD								
<75,000 (n = 7575)	9.7	0.83 (0.70–0.97)	0.99 (0.65–1.45)	0.011	34.9	0.75 (0.67–0.94)	0.96 (0.58–1.42)	<0.001
>75,000 (n = 13,050)	9.0	0.82 (0.77–0.89)	0.96 (0.88–1.10)	0.005	22.1	0.70 (0.58–0.85)	0.91 (0.75–1.11)	<0.001
Charlson comorbidity index								
0–1 (low/moderate) (n = 11,344)	4.6	0.89 (0.80–0.97)	0.99 (0.82–1.17)	0.019	18.9	0.80 (0.50–1.01)	0.98 (0.64–1.27)	0.003
2–3 (severe) (n = 7013)	13.8	0.80 (0.71–0.92)	0.96 (0.87–1.09)	0.003	31.9	0.69 (0.58–0.97)	0.88 (0.74–1.15)	0.001
>4 (very severe) (n = 2268)	18.9	0.74 (0.52–0.93)	0.97 (0.85–1.20)	<0.001	59.4	0.63 (0.52–0.87)	0.92 (0.65–1.18)	<0.001
Surgical department								
Orthopedic surgery (n = 12,993)	8.9	0.84 (0.69–0.95)	0.98 (0.92–1.04)	0.009	24.1	0.73 (0.59–0.88)	0.94 (0.69–1.17)	<0.001
Neurosurgery (n = 7632)	9.9	0.81 (0.73–0.91)	0.98 (0.89–1.08)	0.002	31.4	0.70 (0.58–0.92)	0.93 (0.68–1.20)	<0.001

USD indicates United States dollars.

Rohatgi et al; Ann Surg 2006



Internal and Emergency Medicine (2022) 17:935–936  
https://doi.org/10.1007/s11739-021-02726-8

CE - LETTER TO THE EDITOR



## Medical and surgical co-management: is time ripe?

Ombretta Para<sup>1</sup> · Lorenzo Caruso<sup>1</sup>  · Giacomo Fedi<sup>1</sup> · Lucia Maddaluni<sup>1</sup> · Carlo Nozzoli<sup>1</sup>

Received: 25 December 2020 / Accepted: 27 March 2021 / Published online: 10 April 2021  
© Società Italiana di Medicina Interna (SIMI) 2021

Dear Editor,

The aging of population, the increase of prevalence of chronic comorbidities, and the diffusion of more complex therapies have made patients' healthcare extremely difficult.

This scenario has negatively affected sectoral and specialized management in particular, such as surgical branches.

Supporting these specialists with the figure of the medical internist has become a priority: this approach could offer a significant advantage being an efficient multidisciplinary collaboration that might improve assistance issues.

According to the Working Group on a Professional Issues and Quality of Care of the European Federation of Internal Medicine (EFIM), implementing this strategy of care, encouraging internists to assume a strategic role, and providing continuity of multidisciplinary care in a co-management model would be necessary [1].

Although the literature is poor, experiences of collaboration between geriatricians and orthopedists are well-established in some Italian hospitals.

A co-operation project between internist and emergency general surgeon is born in our Careggi University Hospital in Florence, aiming to a continuous exchange of information and experiences. An analysis of six months, between March 1st 2019 and August 31st 2019, has truly valued real effectiveness of this collaboration.

A series of 524 patients that undergone urgent surgery and subsequently hospitalized in surgical unit have been analyzed: during the first 4 months internist and surgeon assistance has been guaranteed, whereas in the following 3 months the only surgeon service was present. Data about main patient complications, outcome and rate of re-hospitalization in thirty days have been extrapolated.

✉ Lorenzo Caruso  
crslorenzo@gmail.com

<sup>1</sup> Internal Medicine 1, Careggi University Hospital, Florence, Italy

Appendectomy, colectomy, and cholecystectomy were the most common surgical operations. Since our hospital is a Trauma Center, many surgeries were related to abdominal trauma complications. Instead, a less significant number of surgical interventions performed were due to elective surgery complications.

The main characteristics and surgical interventions of the patients are summarized in Tables 1 and 2.

The analysis revealed a significant increase of main clinical complication during the period when the internist was not present (OR 2.89, CI 1.68–4.96,  $p < 0.001$ ). The most frequent complications were electrolyte disturbances, metabolic disorders, and dyspnea associated with respiratory failure (defined as a value of  $\text{PaO}_2 < 60$  mmHg). The management of patients totally charged by surgeons had a worse outcome; in fact, while the mortality and the length of hospitalization were similar in the two periods, patients with only surgeon service needed more often transfers to intensive care units. In particular, the presence of an internist was related to increase in physiotherapy and nutritionist evaluations and that is probably due to better global management of patients. The role of internist consisted of visiting every surgical patient paying particular attention to older and frailer ones also affected by multiple comorbidities. Moreover, the postoperative surgical care was optimized by the use of ultrasound techniques. On the other hand, surgeons had to handle with the specialist aspects of post-operative care. The analysis of this limited experience points out the efficiency of a possible collaboration between internists and surgeons towards the potentiality of the hospitalist role. This is a new medical figure already diffused in many European countries and its importance is increasing even in Italy.

The American College of Physician (ACP) defines an "internist" as the doctor of doctors [2], meaning a specialist capable of handling complex cases, organizing different health care problems and not forgetting continuous coordination with other medical specialists. Internal medicine specialists manage chronic illnesses, prevent diseases, and evaluate acute symptoms.

## ARTICLE IN PRESS

European Journal of Internal Medicine xxx (xxxx) xxx

Contents lists available at ScienceDirect



ELSEVIER

European Journal of Internal Medicine

journal homepage: [www.elsevier.com/locate/ejim](http://www.elsevier.com/locate/ejim)



Letter to the Editor

Co-management hospitalist services for neurosurgery. Where are we?

ARTICLE INFO

**Keywords:**  
Neurosurgery  
Co-management  
Hospitalist  
Comorbidities  
Skills

Dear Editor, the increase in the average age of the population and in the prevalence of chronic comorbidities has made healthcare extremely difficult and sometimes with difficult home management [1,2]. This has negatively impacted on the more sectorial and specialized management, such as in surgical branches. Therefore, there has been an increasingly stringent need for a new organizational model based on the interaction between the specialist skills of surgical and medical disciplines in the same department [3]. According to the Working Group on Professional Issues and Quality of Care of the European Federation of Internal Medicine (EFIM), it is necessary to implement this strategy of care, encouraging internists to assume a strategic role and to provide continuity of multidisciplinary care in a co-management model [4]. The co-management model, which involves the integrated and shared management of the patient by medical and surgical specialists, is becoming increasingly widespread [3,4]. In the literature, the role of the hospitalist is often covered by the internal medicine specialist who, thanks to his cross-disciplinary skills and a holistic approach, seems to be the most suitable figure to ensure adequate perioperative care for complex patients [3–5]. However, there is little data relating to the co-management carried out by the internist in the neurosurgery setting where the figure of the hospitalist is often covered by the neurologist [6].

We analyzed the data of 551 patients who underwent neurosurgery and were subsequently hospitalized in a neurosurgical unit mainly treating brain diseases. We defined Internal-Medicine clinicians and Neurosurgeon Co-management (IMNC) interventions as the implementation of IMNC in the Neurosurgery department in January 2023. We defined a pre-intervention (or pre-IMNC) group of 257 patients admitted to the Neurosurgery department between January 2022 and March 2022. We defined a post-intervention (or post-IMNC) group of 294 patients admitted to the Neurosurgery department between January 2023 and March 2023. Data about main patients' complications, outcome and rate of re-hospitalization in 30 days were extrapolated.

We considered main medical complications occurred during hospitalization as fever, respiratory failure, sepsis, anemia, thrombocytopenia, renal and cardiac impairment, electrolyte disorders, coagulopathy, arrhythmias, hypertension, infection of urinary tract, pneumonia. A diagnosis was defined as a "medical complication" if that

medical condition was not present on admission. We included only those medical complications that could be impacted by hospitalists during hospitalization. We also evaluated readmissions to the hospital for medical causes within 30 days from discharge; any readmission for neurosurgical complications was excluded. Our care model involves a daily collegial discussion of the clinical cases of all hospitalized patients, and neurosurgeons, internal medicine specialists, nurses, physiotherapists and speech therapists were involved in the multidisciplinary rounds. During this daily meetings, internal medicine problems and risk factors were highlighted.

The main clinical, therapeutic, surgical characteristics and hospitalization data of our study population in the pre- and post-IMNC groups are reported in Table 1. There were no significant age, sex and functional differences in the patients' characteristics between the two groups (Table 1). As far as comorbidities are concerned, the Charlson Comorbidity Index was significantly higher ( $p = 0.006$ ) in the cohort of patients post-IMNC. Evacuation surgery was performed significantly more frequently in the patient group pre-IMNC ( $p = 0.018$ ) and endovascular repair or occlusion of head and neck vessels was performed significantly more frequently in the patient group pre-IMNC ( $p = 0.003$ ).

IMNC intervention was associated with a significant decrease in medical complications during the hospital stay (Odds Ratio [OR] 0.33; 95 % Confidence Interval [CI]; 0.23–0.47,  $p = 0.00$ ) and 30- days in-hospital readmission for medical reasons (OR 0.94; 95 % CI 0.91–0.97,  $p = 0.00$ ).

In our study, in-hospital mortality (OR 2.23; 95 % CI; 0.41–7.19,  $p = 0.18$ ) and 30-day mortality (0.82; 95 % CI; 0.41–1.59,  $p = 0.61$ ) were not significantly associated with IMNC. Patients in the post-IMNC cohort had fewer medical complications compared to the traditional cohort, with lower rates of hypertension, hyperglycemia, and electrolyte disorders. Significant reductions in complications were observed after general or orthopedic surgery under the co-management model [7]. Early identification of high-risk patients and prompt management of internist issues, such as comorbidities and polytherapy, account for these findings. According to Rohatgi et al. [8] and to our study, the association between 30-day readmission for medical causes and the hospitalist's role likely results from better diagnostic and therapeutic accuracy for comorbid patients in the surgical ward.

<https://doi.org/10.1016/j.ejim.2024.09.014>

Received 10 September 2024; Received in revised form 13 September 2024; Accepted 16 September 2024

0953-6205/© 2024 European Federation of Internal Medicine. Published by Elsevier B.V. All rights are reserved, including those for text and data mining, AI training, and similar technologies.



## Sounding Board

THE EMERGING ROLE OF  
“HOSPITALISTS” IN THE AMERICAN  
HEALTH CARE SYSTEM

THE explosive growth of managed care has led to an increased role for general internists and other primary care physicians in the American health care system. This change is welcome in many respects, since generalists have perennially been undervalued by health care institutions, payers, and even patients.<sup>1-3</sup> The greater prominence of generalism has led to an increase in the number of medical students who choose careers in primary care,<sup>4</sup> expanded job opportunities for generalists,<sup>5</sup> and a modest increase in the incomes of primary care physicians.<sup>6</sup>

Two of the principles underlying generalism, whether in the form of internal medicine, pediatrics, or family medicine, have been comprehensiveness and continuity.<sup>7,8</sup> Ideally, the primary care physician would provide all aspects of care, ranging from preventive care to the care of critically ill hospitalized patients. This approach, argued the purists, would result in medical care that was more holistic, less fragmented, and less expensive.<sup>9</sup> To its proponents, the notion was so attractive — the general internist admits the patient to the hospital, directs the inpatient workup, and arranges for a seamless transition back to the outpatient setting — that questioning it would have seemed sacrilegious merely a few years ago.

Unfortunately, this approach collides with the realities of managed care and its emphasis on efficiency. As a result, we anticipate the rapid growth of a new breed of physicians we call “hospitalists” — specialists in inpatient medicine — who will be responsible for managing the care of hospitalized patients in the same way that primary care physicians are responsible for managing the care of outpatients. Specialists in inpatient care have long had a central role in urban hospitals in Canada and Great Britain, but until recently, such specialists have been scarce in the United States. However, a role for this specialty is now being developed both in and outside academia, especially in areas where managed care predominates, such as San Francisco, and we expect this growth to accelerate soon.

We believe the hospitalist specialty will burgeon for several reasons. First, because of cost pressures, managed-care organizations will reward professionals who can provide efficient care. In the outpatient setting, the premium on efficiency requires that the physician provide care for a large panel of patients and be available in the office to see them promptly as required. There is no greater barrier to efficiency

in outpatient care than the need to go across the street (or even worse, across town) to the hospital to see an unpredictable number of inpatients, sometimes several times a day. There are parallel pressures for efficiency in the hospital. Since the inpatient setting involves the most intensive use of resources, it is the place where the ability to respond quickly to changes in a patient’s condition and to use resources judiciously will be most highly valued. This should prove to be the hospitalists’ forte.

Equally pressing is the question of value, defined as the quality of care divided by its cost.<sup>10</sup> The survival of all health care systems is becoming increasingly dependent on the delivery of high-value care. (For academic health centers, this means that more expensive care must be justified by better outcomes.) Many physicians, though primarily serving outpatients, have exceptional skills in providing inpatient care. It seems unlikely, however, that high-value care can be delivered in the hospital by physicians who spend only a small fraction of their time in this setting. As hospital stays become shorter and inpatient care becomes more intensive, a greater premium will be placed on the skill, experience, and availability of physicians caring for inpatients.

The debate over the role of hospitalists is taking place against the backdrop of the larger controversy over whether generalists or specialists should provide care for relatively ill patients.<sup>11</sup> The first decade of managed care has been dominated by a gatekeeper model, in which care is managed by a primary care physician. There is some evidence that this model saves money,<sup>12,13</sup> and for common diseases, the quality of care provided by generalists and specialists appears to be similar.<sup>14</sup> Building on a considerable body of data demonstrating a positive relation between procedural experience and outcomes,<sup>15-18</sup> a number of recent studies have examined whether a similar relation exists for nonprocedural care of patients with complex medical illnesses. Those who favor the use of inpatient specialists for hospital care point to the strong correlation of experience with the quality of care provided for patients in an intensive care unit,<sup>19,20</sup> as well as for those with AIDS,<sup>21-25</sup> asthma,<sup>26,27</sup> rheumatoid arthritis,<sup>28</sup> or acute coronary syndromes.<sup>29-31</sup>

If our prediction of an increased role for hospitalists is borne out, the effects on academic medical centers will be profound. The “triple threat” leader — skilled clinician, researcher, and educator — was the paradigm of exceptional faculty achievement (or fantasy) for more than a generation. Balancing a productive research career with teaching and clinical care was easier when academic health centers were less accountable for the quality and cost of clinical care than they are now. Given the parallel pressure for funding research,<sup>32</sup> one can envision fewer triple threats in the future, with researchers concentrating

on research and clinician-educators concentrating on clinical work and teaching. And the clinician-educators may branch again, with some focusing on outpatients and others on inpatients. We also believe that the relation between quality and volume in the performance of procedures may lead to another schism between medical specialists who primarily perform procedures and those who do not.

What will hospitalist jobs in academia look like? In the light of the increasing intensity of inpatient care, we believe that 12 months as an attending physician is a formula for burnout; 3 to 6 months a year seems more sustainable. The experience of critical care specialists (“intensivists”) is a close parallel.<sup>19,20,33</sup> In academic settings, these specialists typically limit their yearly service on the intensive care unit to three to six months in order to prevent burnout and to have opportunities for academic productivity (Cohen N, Luce J: personal communication). As with intensivists, a major challenge is to link the hospitalist role successfully with other activities. The outpatient enterprise, which is subject to the same pressures for efficiency, high quality, and low cost, may have little use for a physician who is otherwise occupied 80 percent of the time during half the year, except perhaps in drop-in settings that do not require continuity of care. For some physicians who are trained in a specialty, work as a hospitalist may be complemented by an inpatient or outpatient consulting practice in that specialty, and for generalists, inpatient consultation in general medicine will have a similar role. In the academic setting especially, a premium will be placed on clinical quality improvement, the development of practice guidelines, and outcomes research, not only to provide the physician with a creative outlet and a potential source of funding during the nonclinical months but also to give the academic center a practical research-and-development arm. One of the advantages of the hospitalist model is that it creates a core group of faculty members whose inpatient work is more than a marginal activity and who are thus committed to quality improvement in the hospital.

For house staff in internal medicine, the introduction of hospitalists may mean a greater likelihood of being supervised by attending physicians who are highly skilled and experienced in providing inpatient care. House staff have long enjoyed a certain amount of autonomy, because many of their faculty supervisors have been relatively unfamiliar with modern inpatient care. Such autonomy may be diminished with the new approach to inpatient care. Although there is bound to be transitional pain, we believe that the potential for improved inpatient teaching will more than compensate for it. Moreover, this change will help answer public calls for closer and more effective faculty oversight of house staff and students.<sup>34</sup>

Training programs in internal medicine have emphasized flexibility. Many traditional programs, although based in inpatient settings, pride themselves on providing training that is flexible enough to allow graduates to practice primary care competently. Pressures from residency-accreditation agencies have also resulted in a broader curriculum. Over the past few years, many traditional programs have augmented and improved training in ambulatory care so that their graduates will have the necessary flexibility. And most primary care programs, while training residents for careers as outpatient generalists, have included enough inpatient and intensive care medicine in the curriculum to ensure that their graduates are competent in these settings. However, if the medical marketplace creates jobs that are based in either inpatient or outpatient settings (but not both), the primary care program of the future may need to provide only enough inpatient training so that its graduates will know how to care for sick outpatients. Conversely, some traditional programs may develop hospitalist tracks that emphasize acquisition of the skills most relevant to inpatient practice. If such tracks are developed, it will be important not to reduce training in ambulatory care too aggressively, since the competent hospitalist will need a full understanding of what can — and cannot — be done in the outpatient setting.

The hospitalist trend is already visible at both teaching and nonteaching hospitals in areas where managed care has taken root. Some medical groups, such as the Scripps Clinic in La Jolla, California, use a rotating schedule of primary care physicians, each of whom is the “dedicated admitting physician” for week-long tours of duty.<sup>35</sup> The Park Nicollet Medical Group, a large multispecialty practice in Minneapolis, uses a hybrid model with two full-time hospitalists complemented by rotating general internists and family physicians.<sup>36</sup> Other groups, such as San Francisco’s California Pacific Medical Group, employ full-time hospitalists to handle inpatient care for a large group of patients receiving care on a capitated basis (Aronowitz P: personal communication). Similarly, the Kaiser Permanente system now uses full-time hospitalists in 3 of its 15 hospitals in northern California and is planning to introduce this model in most of its other facilities in the region over the next few years (Likosky W: personal communication). Anecdotal reports suggest that the use of each of these models has resulted in substantial decreases in lengths of stay, hospital costs, and specialty consultation.<sup>35-38</sup>

In both academic and nonacademic settings, the most effective way to organize hospitalists may be as a multispecialty group. Envision a model for a large integrated health care system in which a team of hospitalists — some trained as generalists, others as specialists — shares responsibility for the management of inpatient care. Consultation is provided by





**Forum Risk Management**

obiettivo sanità salute

**26-29 NOVEMBRE 2024**  
**AREZZO FIERE E CONGRESSI**

**19**

## La medicina interna nell'assistenza del paziente chirurgico complesso

Marco Fabbri,<sup>1</sup> Simone Galli,<sup>2</sup> Alessandro Morettini<sup>1</sup>

---

### Modelli di cura

Consulenza medica perioperatoria

**Comanagement medico-chirurgico**

Reparto di Medicina Interna Perioperatoria

QUADERNI - Italian Journal of Medicine 2017; volume 5(2):4-8

## **Il Comanagement Medico Chirurgico: Proposta di Documento Multisocietario**

- Istituzionalizzare la figura dell'Internista (o affine) in Ambito Chirurgico nei pazienti sottoposti a chirurgia maggiore o fragili/comorbidi
- Istituzionalizzare la Presenza dell'Internista in tutto il percorso del paziente chirurgico

DOCUMENTO  
FADOI/ACOI



DOCUMENTO  
Multisocietario



PROPOSTA  
MINISTERO/AGENAS



INTERNISTA ACCREDITATO IN  
CONTESTO CHIRURGICO