Le criticità della sedazione nella colonscopia di screening

Rita Conigliaro

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Azienda Ospedaliero-Universitaria

MODENA

Criticità nella sedazione-Agenda CRITICAL STEPS

1. La sedazione in endoscopia è imprescindibile
2. Una Colonscopia senza sedazione non permette un esame di qualità
3. Spesso c’è la necessità di praticare una sedazione profonda anche in assenza dell’anestesista ma con un agreement istituzionale
4. La sedazione deve essere praticata in sicurezza per cui serve un programma di training e retraining periodico

REDUCTION OF “DISCOMFORT” = SEDATION? ANALGESIA?

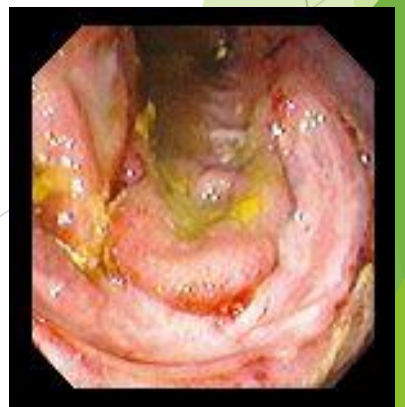
"Colonoscopy discomfort" is caused by:

Anxiety about the exam and its outcome

Invasiveness of the procedure

Pain from abdominal distension and

Reflex phenomena to nociceptive stimuli



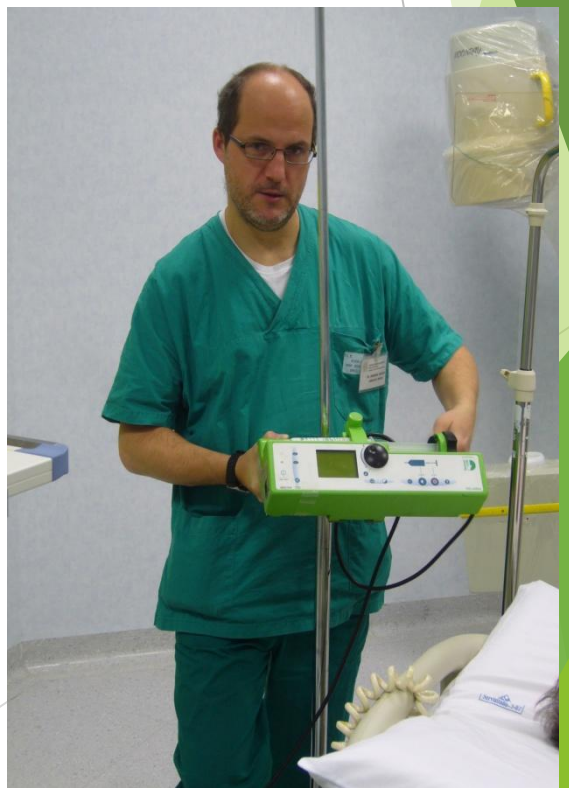
GOALS OF SEDATION

- Elimination/reduction of patient discomfort
- Guaranteeing greater patient safety in relation to analgesic protection
- Facilitation of the procedure

Italian Society of Digestive Endoscopy (SIED) Sedation Commission. Endoscopy. 2006 ; 38 :1137-43

BACKGROUND , RATIONALE AND GOALS

- In the past few years , interest in sedation in gastrointestinal endoscopy has increased
- One major issue is the exact indication for sedation
- Premedication is not necessary for all gastroenterological endoscopic interventions
- **However , premedication can make the examination more confortable for both the patient and the physician**



DGVS GL Endoscopy 2009 ; 41 :787-815

SEDATION IN DIGESTIVE ENDOSCOPY

Critical step 1

- **Reccomendation** : Sedation should be offered to every patient before endoscopy

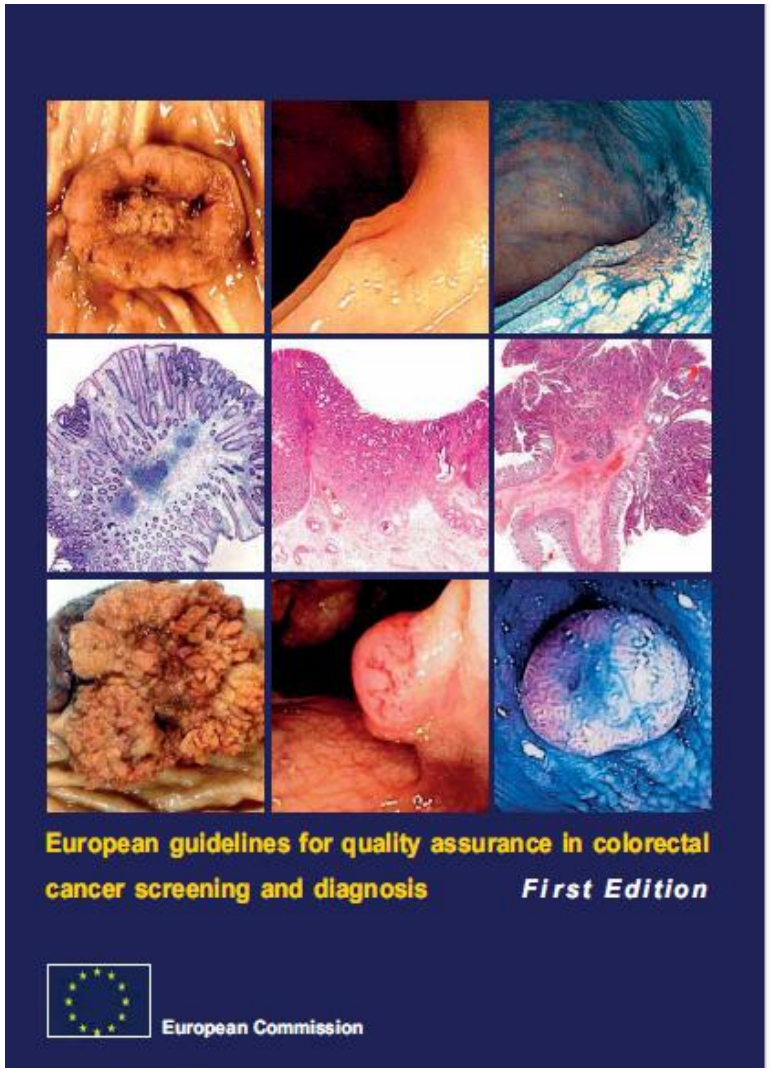
- The advantages and disadvantages should be discussed in detail every patient **has the right** to an endoscopic examination **pain-less and stress –free**

Recommendation Grade A, evidence 5 , consensus (75-98%)

Documento Regionale Screening 2012

Endoscopy 2009 ; 41 :787-815

Endoscopic Technique



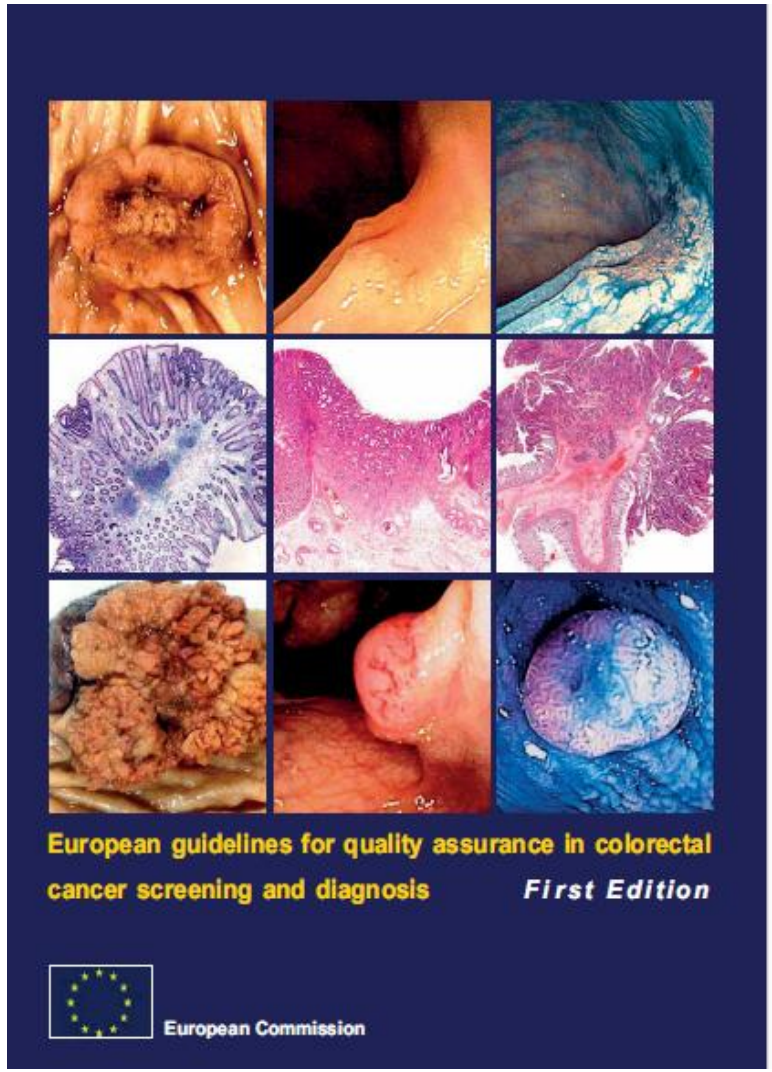
Endoscopic technique

5.29 There should be local policies and processes in place to optimise sedation and patient support in order to maximise tolerance and minimise risk of complications **(I - B).Sect 5.4.4**

5.30 Because there is no clear benefit from a particular approach **(I), and for practical reasons it is** recommended that policies on the use of sedation should be adopted according to protocols based on national or pan-European guidelines, and must take into account historical context, the impact on the patient experience and costs **(I - B).Sect 5.1.3**

European guidelines for quality assurance in colorectal cancer screening and diagnosis - First edition 2010

Sedation , comfort , safety



Sedation **improves patient tolerance of colonoscopy**, particularly sedation using propofol combined with other sedative agents such as midazolam and analgesics such as pethidine and fentanyl (McQuaid & Laine 2008) **(I). However, excessive sedation is considered to be an important contributor** to cardio-respiratory related deaths following endoscopy in high-risk patients, particularly the elderly

European guidelines for quality assurance in colorectal cancer screening and diagnosis - First edition 2010

Ministero della Salute

PIANO ONCOLOGICO NAZIONALE

2010/2012

SINTESI PER LA STAMPA

Tabella 4.4 **RINNOVO TECNOLOGICO DELLE ATTREZZATURE ENDOSCOPIA GASTROENTEROLOGICA Azioni Programmatiche Triennio 2010 – 2012**

Acquisizione di dati di attività certi,numerici e qualitativi
Si auspica il rinnovo del protocollo d'intesa FISMAD – Ministero salute e l'estensione della raccolta dei dati gestionali alle prestazioniambulatoriali. Inoltre, la creazione in rete di un *database* accessibile in tempo reale appare come lo strumento più idoneo a monitorare l'attività e a indirizzare gli interventi. I parametri di qualità includeranno appropriatezza, outcome diagnostico/terapeutico e *rate* di complicanze. La fattibilità del progetto sarà oggetto di valutazione da parte del Ministero

Adeguamento tecnologico
La rottamazione degli strumenti ottici, l' ecoendoscopia e l'implementazione dei requisiti di sicurezza per le unità di endoscopia sono le priorità di ammodernamento. Per l'ecoendoscopia si auspica la creazione di un *network* limitato di centri di ecoendoscopia a elevato contenuto tecnologico e professionale

Formazione e re-training
La formazione endoscopica deve essere inserita con specifico programma professionalizzante, e con relativa valutazione periodica e finale, nell'ambito delle Scuole di Specializzazione di Gastroenterologia ed Endoscopia Digestiva. Il re-training deve essere promosso e certificato dalle Società Scientifiche

- **Sedazione profonda**
  L'accesso ad adeguata sedazione è cruciale ai fini dell'efficienza della pratica endoscopica in oncologia (screening, diagnosi, terapia) ma anche ai fini dell'umanizzazione dell'assistenza. In linea con l'evidenza disponibile in letteratura e seguendo l'esperienza di altri Paesi Europei, la possibilità di praticare la sedazione profonda da parte del gastroenterologo anche in assenza dell'anestesista sarà oggetto prioritario di valutazione e codifica da parte della Commissione Programmazione del Ministrero

- **Innovazione gestionale con i MMG**

DOCUMENTAZIONE REGIONALE

RegioneEmiliaRomagna
Assessorato Politiche per la salute

PROTOCOLLO DIAGNOSTICO-TERAPEUTICO
DELLO SCREENING PER LA DIAGNOSI PRECOCE
DEL TUMORE DEL COLON RETTO
NELLA REGIONE EMILIA-ROMAGNA

II EDIZIONE

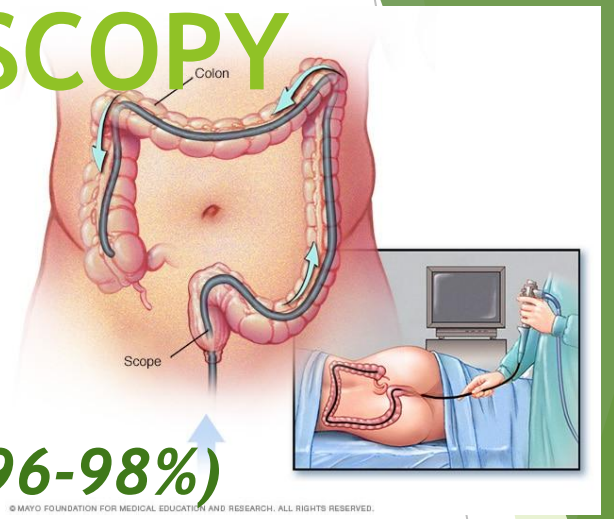
Settembre 2012

Sedazione

La colonscopia, soprattutto quando eseguita senza supporti farmacologici, risulta spesso sgradevole e talvolta dolorosa per cui una sedazione – analgesia può migliorare considerevolmente la tollerabilità ed il corretto completamento dell'indagine. Occorre peraltro ricordare che la sedo-analgesia è correlata, in molte serie della letteratura, ad un modesto aumento delle complicanze cardio-respiratorie, il che impone che tutti gli operatori seguano periodicamente corsi quali il BLS-D.

In ogni ambulatorio in cui si eseguono le colonscopie deve essere possibile* eseguire una sedazione. In questi casi si utilizza la "sedo-analgesia" e la decisione di praticarla deve essere condivisa fra medico e paziente.

SEDATION IN COLONOSCOPY

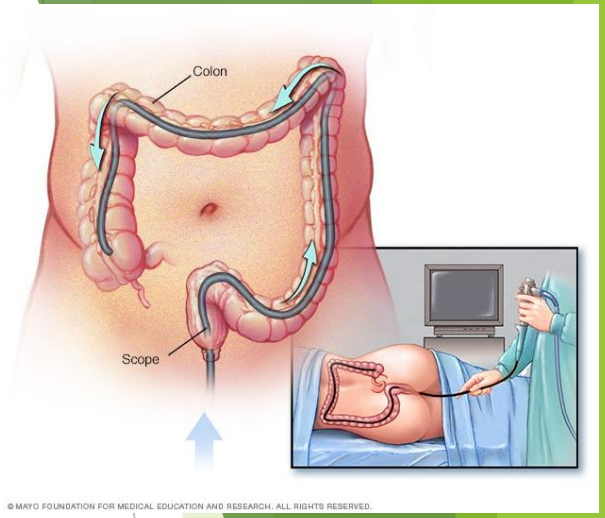


PROBLEMS OF COLONOSCOPY
***WITHOUT** SEDATION (Critical step 2)*

- ***Reduced cecal intubation rate (86-94% vs. 96-98%)***
- ***Increased risk of missing adenomas or cancers (until 15%)***
- ***Requires greater endoscopist skill***
- ***Only sedated patients reported being "very satisfied"***

Thiis Evens E. Gastroint Endosc 2000, Cacho G. Gastroenterol Hepatol 2000, Rex DK. Gastroint Endosc 1999

SEDATION IN COLONOSCOPY



► **Table 4** Sedation/analgesia regimens administered for the ... procedure types (Q24–28), %.

	Procedure				
	Diagnostic upper GI (n = 501)	**Colonoscopy* (n = 500)**	**ERCP (n = 453)**	**EUS (n = 429)**	**POEM, ESD, bariatric procedure, DAE (n = 435)**
Unsedated endoscopy	23.2	13.4	–	–	–
Sedation on demand	4.7	3.9	–	–	–
Benzodiazepine only	16.9	5.0	0.8	3.2	1.7
Benzodiazepine and opioid	16.1	28.3	16.8	26.6	21.5
Propofol only	28.8	35.5	34.0	42.5	32.8
Propofol and benzodiazepine	5.1	4.9	10.9	8.7	7.6
Propofol and opioid	3.2	4.5	11.4	7.8	12.6
Propofol, benzodiazepine, and opioid	1.7	3.5	14.6	6.5	11.8
General anesthesia	–	–	9.0	1.9	7.3
Other	1.1	1.1	0.3	1.7	4.4

DAE, device-assisted enteroscopy; ERCP, endoscopic retrograde cholangiopancreatography; ESD, endoscopic submucosal dissection; EUS, endoscopic ultrasound; POEM, peroral endoscopic myotomy.
* Including polypectomy and small-sized endoscopic mucosal resection.

Sedation practices in Gastrointestinal Endoscopy: European Society of Gastrointestinal Endoscopy (ESGE) survey

Triantafyllou Konstantinos et al. Sedation Practices in … Endoscopy 2024

HOW TO GET THE BEST PERFORMANCE IN SEDATION? (critical step 3 : need deep sedation)

BENZODIAZEPINE

Diazepam

Midazolam

Remimazolam

OPIOID

Fentanyl

Remifentanyl

Petidina

HYPNOTIC

Propofol

GAS

Sevorane

Isoforane

Protossido d'azoto

AGOPUNCTURE

HYPNOSIS

Research Article

Use of Remimazolam for procedural sedation in real-life Digestive Endoscopy

https://doi.org/10.21203/rs.3.rs-4564245/v1

Rita Conigliaro, Flavia Pigò, Anna Caiazzo, Giuseppe Grande, Salvatore Russo, and 6 more

EDITORIAL

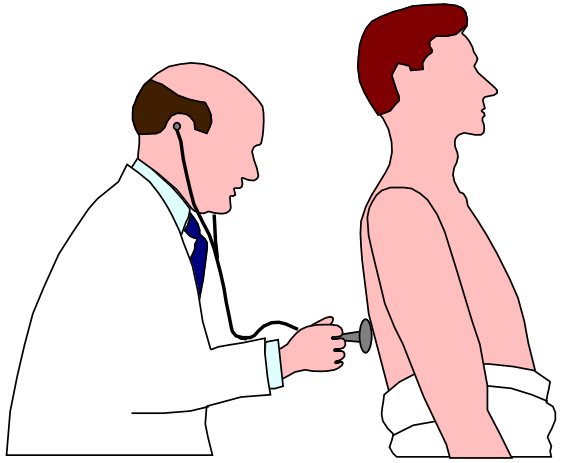
The menu of endoscopic sedation: all-you-can-eat, combination set, á la carte, alternative cuisine, or go hungry

- BUFFET
- MENU' FISSO
- "A LA CARTE"
- CUCINA ALTERNATIVA
- "Rimandare i pz affamati" = SVEGLI!!!

Wong RCK. Gastrointestinal Endoscopy 2001

SELECTION CRITERIA FOR THE TYPE OF SEDO-ANALGESIA (SAP)

- *Patient history and clinical assessment*
- *Patient compliance and risk profile*
- *Type of endoscopic examination*
- *Need to combine sedation and analgesia to reduce visceral reflexes evoked by the examination*



TRIAGE 'S ROLE??!!

S3 Guideline:
Sedation for gastrointestinal endoscopy 2008

Authors A. Riphaus, T. Wehrmann, B. Weber, J. Arnold, U. Beilenhoff, H. Bitter, S. von Delius, D. Domagk, A. F. Ehlers, S. Faiss, D. Hartmann, W. Heinrichs, M.-L. Hermans, C. Hofmann, S. In der Smitten, M. Jung, G. Kähler, M. Kraus, J. Martin, A. Meining, J. Radke, T. Rösch, H. Seifert, A. Sieg, B. Wigginghaus, I. Kopp

Institutions The affiliations are listed in Table 1 of this document.

Endoscopy 2009; 41: 787 – 815

GUIDELINE

Guidelines for sedat oscopy

Prepared by: ASGE STAND/

Dayna S. Early, MD, FASGE
John J. Vargo, II, MD, MPH
Vinay Chandrasekhara, MD
Deborah A. Fisher, MD, MH
Mouen A. Khashab, MD, V.
John R. Saltzman, MD, FAS
Previous Committee Chair,

), Ruben D. Acosta, MD,
,
Ha Hwang, MD, PhD, FASGE,
ha, MD, FASGE,
MD, FASGE,

The ASGE guidelines for sed and endorsed by the American Association for the Study oenterology, and the American Gastroenterological Associatio

This document was reviewed rican Society for Gastrointestinal Endoscopy.

Balanced propofol for moderate sedation

The use of propofol in addition to an opioid and benzodiazepine is referred to as balanced propofol sedation (BPS). BPS can be effective in achieving moderate sedation for endoscopic procedures.[4,50] BPS will be discussed further in the section on propofol-mediated sedation.

PROPOFOL-MEDIATED SEDATION

Non-anesthesiologist–administered propofol sedation

Extensive data have demonstrated the safety and efficacy of non-anesthesiologist–administered propofol sedation (NAAP). NAAP can be divided further into nurse-administered propofol sedation (NAPS), in which propofol is administered as a single agent to target deep sedation under the direction of the endoscopist, and BPS, which involves the administration of a single dose of an opioid and benzodiazepine followed by intermittent bolus administration with propofol to target moderate sedation. NAAP has been associated universally with shorter sedation times and shorter recovery times, when compared with the combination of an opioid and benzodiazepine targeting moderate sedation thus supporting its use in routine sedation regimens.[50] NAAP requires specialized training, patient selection, and personnel dedicated to continuous physiologic monitoring (Table 4). Regulations regarding administration of propofol are determined at the state, regional, and local levels regardless of the targeted level of sedation. As a result, the practice of NAAP is quite limited nationally. Hence, propofol-based sedation for low-risk patients undergoing routine procedures often is administered by anesthesia personnel.

Published protocols for NAPS[51-53] report various dosing schedules of administered propofol. Propofol dosing and the depth of sedation should be individualized to the needs of each patient.[7]

GIE 2018

Sedo/analgesia in GI Endoscopy

ORIGINAL ARTICLE

Patient safety during sedation by anesthesia professionals during routine upper endoscopy and colonoscopy: an analysis of 1.38 million procedures

John J. Vargo, MD, MPH,[1] Paul J. Niklewski, PhD,[2,3] J. Lucas Williams, MPH,[4] James F. Martin, PhD,[2] Douglas O. Faigel, MD[5]

Cleveland, Cincinnati, Ohio; Portland, Oregon; Scottsdale, Arizona, USA

Background and Aims: Sedation for GI endoscopy directed by anesthesia professionals (ADS) is used with the intention of improving throughput and patient satisfaction. However, data on its safety are sparse because of the lack of adequately powered, randomized controlled trials comparing it with endoscopist-directed sedation (EDS). This study was intended to determine whether ADS provides a safety advantage when compared with EDS for EGD and colonoscopy.

Methods: This retrospective, nonrandomized, observational cohort study used the Clinical Outcomes Research Initiative National Endoscopic Database, a network of 84 sites in the United States composed of academic, community, health maintenance organization, military, and Veterans Affairs practices. Serious adverse events (SAEs) we

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Conclusions: Within the confines of the SAE definitions used, use of anesthesia professionals does not appear to bring a safety benefit to patients receiving colonoscopy and is associated with an increased SAE risk for ASA I, II, and III patients undergoing EGD. (Gastrointest Endosc 2016;■:1-8.)

Conclusioni….l'uso di specialisti in anestesia non sembra portare un beneficio in termini di sicurezza per i pazienti sottoposti a colonscopia ed è associato ad un aumentato rischio di SAE per ASA I, II, e III pazienti sottoposti a EGD.

European Society of Gastrointestinal Endoscopy, European Society of Gastroenterology and Endoscopy Nurses and Associates, and the European Society of Anaesthesiology Guideline: Non-anesthesiologist administration of propofol for GI endoscopy

Authors J. M. Dumonceau[1,1], A. Riphaus[2,1], J. R. Aparicio[3], U. Beilenhoff[4], J. T. A.Knape[5], M. Ortmann[6], G. Paspatis[7], C. Y. Ponsioen[8], I. Racz[9], F. Schreiber[10], P. Vilmann[11], T. Wehrmann[12], C. Wientjes[8], B. Walder[13] and the NAAP Task Force Members[2]

Institutions Institutions are listed at the end of article.

Dumonceau JM et al. ESGE-ESGENA-ESA Guideline for NAAP ... Endoscopy 2010; 42: 960 – 974

Non-anesthesiologist administration of propofol for gastrointestinal endoscopy: European Society of Gastrointestinal Endoscopy, European Society of Gastroenterology and Endoscopy Nurses and Associates Guideline – Updated June 2015

Authors: Jean-Marc Dumonceau[1], Andrea Riphaus[2], Florian Schreiber[3], Peter Vilmann[4], Ulrike Beilenhoff[5], Jose R. Aparicio[6], John J. Vargo[7], Maria Manolaraki[8], Caroline Wientjes[9], István Rácz[10], Cesare Hassan[11], Gregorios Paspatis[12]

Institutions: Institutions are listed at end of article.

Bibliography
DOI http://dx.doi.org/10.1055/s-0034-1393414
Published online: 12.11.2015

This Guideline is an official statement of the European Society of Gastrointestinal Endoscopy (ESGE) and the European Society of Gastroenterology and Endoscopy Nurses and Associates (ESGENA). It addresses the administration of propofol by non-anesthesiologists for gastrointestinal (GI) endoscopy.

Digestive and Liver Disease xxx (2017) xxx–xxx

Contents lists available at ScienceDirect

Digestive and Liver Disease

journal homepage: www.elsevier.com/locate/dld

Digestive Endoscopy

Italian Society of Digestive Endoscopy (SIED) position paper on the non-anaesthesiologist administration of propofol for gastrointestinal endoscopy

Rita Conigliaro[a,*], Lorella Fanti[b], Mauro Manno[c], Piero Brosolo[d], Italian Society of Digestive Endoscopy (SIED) Sedation Group

[a] Gastroenterology and Digestive Endoscopy Unit, Ospedale S. Agostino-Estense Hospital/Hospital-University Institution, Modena, Italy
[b] Division of Gastroenterology and Gastrointestinal Endoscopy, Vita-Salute San Raffaele, University-Scientific Institute San Raffaele, Milan, Italy
[c] Digestive Endoscopy Unit, Ospedale di Carpi, Ramazzini Hospital, Carpi, Modena, Italy
[d] Gastroenterology Unit, Ospedale S. Maria degli Angeli Hospital, Pordenone, Italy

Digestive and Liver Disease xxx (2017) xxx–xxx

Contents lists available at ScienceDirect

Digestive and Liver Disease

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Digestive Endoscopy

Italian Society of Digestive Endoscopy (SIED) position paper on the non-anaesthesiologist administration of propofol for gastrointestinal endoscopy

Rita Conigliaro[a,*], Lorella Fanti[b], Mauro Manno[c], Piero Brosolo[d], Italian Society of Digestive Endoscopy (SIED) Sedation Group

[a] Gastroenterology and Digestive Endoscopy Unit, Ospedale S. Agostino-Estense Hospital/Hospital-University Institution, Modena, Italy
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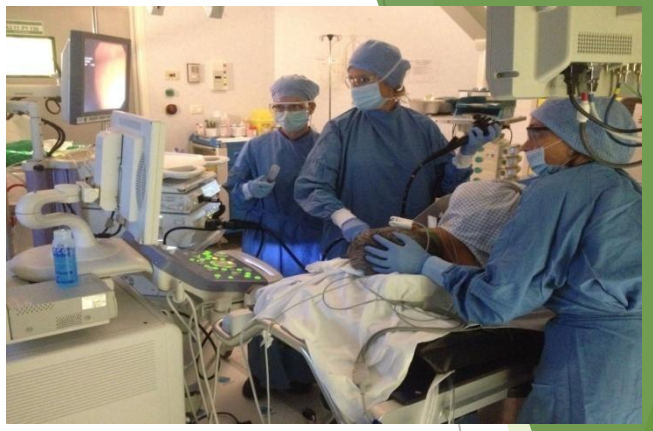
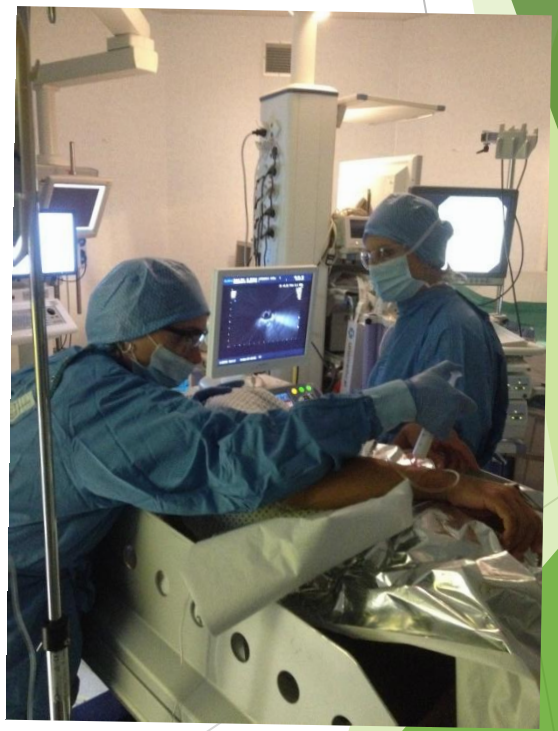
[c] Digestive Endoscopy Unit, Ospedale di Carpi, Ramazzini Hospital, Carpi, Modena, Italy
[d] Gastroenterology Unit, Ospedale S. Maria degli Angeli Hospital, Pordenone, Italy

Protocols concerning propofol use must be shared with the hospital's anaesthesiology staff and approved by the hospital's Executive Director.

SEDATION IN ENDOSCOPY

Collection of nursing history and informed consent, including sedation, from the doctor





THE ENDOSCOPIST IS RESPONSIBLE FOR ADMINISTRATING DRUGS FOR SEDATION AND ANALGESIA AND FOR MONITORING!!!

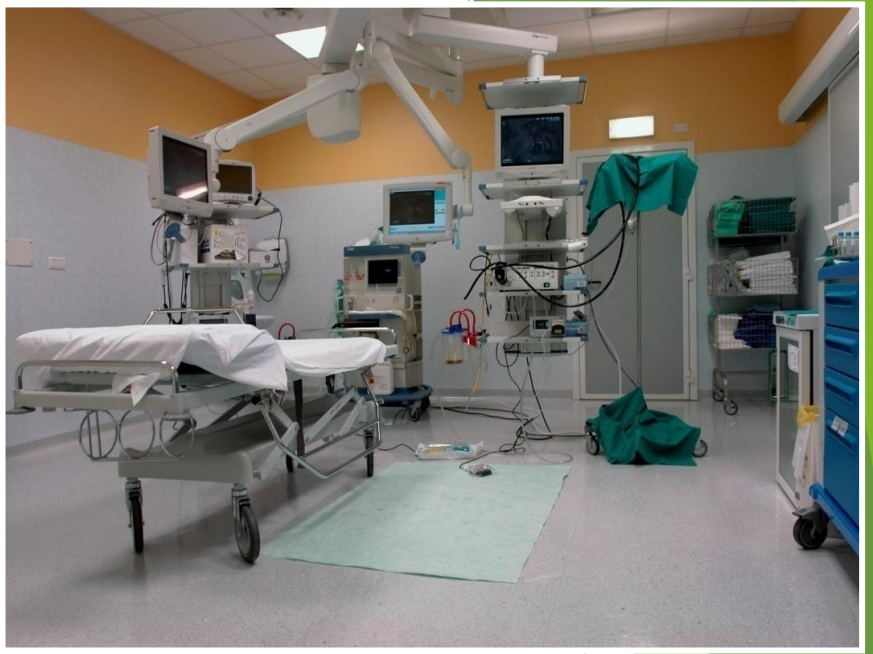
Monitoring who?

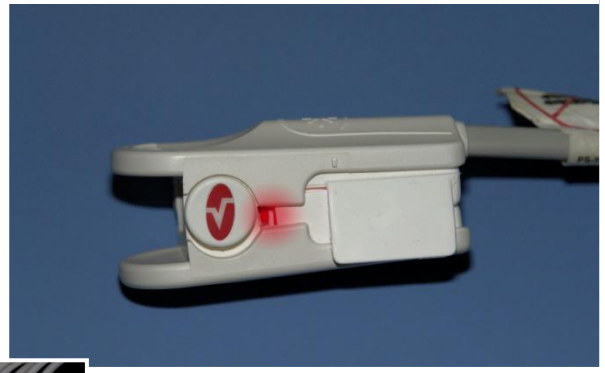
Any operator other than the endoscopist who has received appropriate training in endoscopy sedation and is present throughout the procedure.

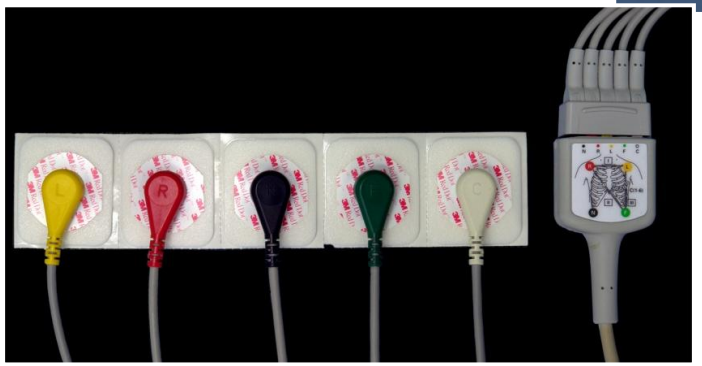
MONITORING

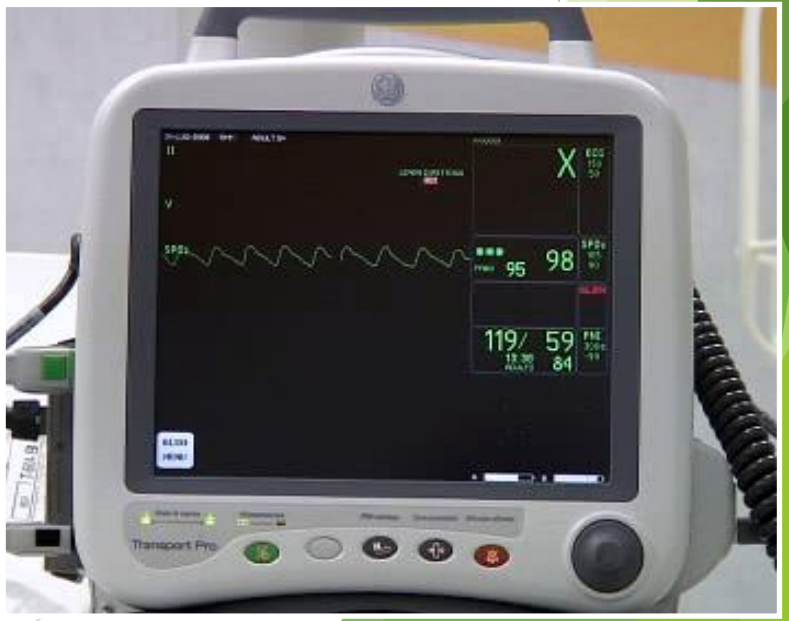
When?

- Pre-procedure
- After administration of sedative and analgesia medications
- At intervals during the procedure
- During the recovery phase
- Before discharge









SEDO-ANALGESIA PROCEDURALE
SAP

SEDO-ANALGESIA PROCEDURALE
SAP

1 ***Sedazione - Analgesia Procedurale (SAP).*** Un concetto chiave e condiviso è l'assoluta inappropriatezza del termine ancora correntemente usato di "sedazione cosciente" o "vigile", in quanto la sedazione determina sempre una riduzione del livello di coscienza. Si raccomanda SAP come termine appropriato a sostituire quello di "sedazione cosciente": definisce una condizione ottenuta con un ipnotico e/o un analgesico per rendere possibile un'efficace procedura endoscopica diagnostica o terapeutica, garantendo che il paziente sia strettamente monitorato per prevenire i potenziali effetti avversi.

SEDO-ANALGESIA PROCEDURALE
SAP

- ✓ Non è possibile eseguire procedure endoscopiche diagnostiche e terapeutiche di qualità senza sedazione
- ✓ La sedazione oggi è **Sedo-Analgesia Procedurale (SAP):** definisce una condizione ottenuta con un sedativo o un ipnotico, a cui associare o meno un analgesico
- ✓ Indispensabile una **valutazione pre-procedurale e stratificazione del rischio dei pazienti** da sedare in **Settings** adeguati e in sintonia con le Linee Guida e Buone Pratiche Cliniche di riferimento
- ✓ In accordo con i **"Profili di responsabilità"** i teams di endoscopia possono eseguire sedazioni in autonomia su pazienti ASA1 e 2 (e 3 non complessi) per procedure non lunghe o complesse, *dopo un adeguato training fornito e supervisionato dai Dipartimenti/Unità di AR, e comunque con* anestesista prontamente reclutabile in caso di necessità **(anestesista di area)**

SEDO/ANALGESIA IN GI ENDOSCOPY

European Curriculum for Sedation Training in Gastrointestinal Endoscopy: Position Statement of the European Society of Gastrointestinal Endoscopy (ESGE) and European Society of Gastroenterology and Endoscopy Nurses and Associates (ESGENA)

Authors J.-M. Dumonceau[1,*], A. Riphaus[2,*], U. Beilenhoff[3], P. Vilmann[4], P. Hornslet[4], J. R. Aparicio[5], M. Dinis-Ribeiro[6], E. Giostra[7], M. Ortmann[8], J. T. A. Knape[9], S. Ladas[10], G. Paspatis[11], C. Y. Ponsioen[12], I. Racz[13], T. Wehrmann[14], B. Walder[15]

Institutions Institutions are listed at the end of article.

2. Aims of the European Curriculum

This European Curriculum is intended for teachers and institutions organizing sedation courses.

Endoscopy 2013; 45: 496–504

European Curriculum for Sedation Training in Gastrointestinal Endoscopy: Position Statement of the European Society of Gastrointestinal Endoscopy (ESGE) and European Society of Gastroenterology and Endoscopy Nurses and Associates (ESGENA)

BASIC LIFE SUPPORT

Airway

Breathing

Circulation

Theoretical part
– Pharmacology, pharmacokinetics, and interactions of sedatives, analgesics, and respective antidotes
– Principles of sedation andmonitoring patients including analysis of ECG monitoring
– Different sedation concepts
– Pre-, intra- and postendoscopy patient care concerning sedation, monitoring, recovery, discharge criteria, management of complications and documentation
– Legal aspects (e. g. delegation, informed consent)
Practical part
– Basic airway management (e. g. freeing of airways, jaw thrust, bag-valve mask ventilation)
– Use of different tubes for airway ventilation (e. g. Guedel tube, laryngeal tube)
– Treatment of acute respiratory problems
– BLS and ACLS, including the use of defibrillators

ACLS, advanced cardiac life support; BLS, basic life support; ECG, electrocardiogram

ADVANCED CARDIAC LIFE SUPPORT

Intubation

Defibrillation

Drugs

Linee di indirizzo per la

GESTIONE SICURA ED APPROPRIATA DELLE PRESTAZIONI ENDOSCOPICHE IN SEDOANALGESIA

Gruppo di lavoro Regione Emilia-Romagna

Marzo 2025

LIVELLO		PERSONALE	SEDI	LOGISTICA	ANESTESISTA
1	ENDOSCOPIA SENZA ANESTESISTA	Personale medico ed infermieristico specificamente formato per la gestione routinaria e delle criticità intra e periprocedurali	Endoscopia digestiva ottemperante ai requisiti di setting pre e post-procedurale	Collocazione anche fuori da stabilimenti ospedalieri se rispettati tutti gli altri criteri descritti	Attività di pronto intervento secondo protocollo definito. Deve essere presente e disponibile nella struttura durante le attività endoscopiche
2	ENDOSCOPIA CON ANESTESISTA *ON DEMAND* (ANESTESISTA DI AREA)	Personale medico ed infermieristico specificamente formato per la gestione routinaria e delle criticità intra e periprocedurali, con specifico focus sulla complessità procedurale ed assistenziale	Preferibile un blocco integrato livello 2/3 ma, ove non possibile, anche in sedi diverse	Collocazione in prossimità dei blocchi operatori o in altra sede di facile accesso per l'anestesista	Presente nel blocco ed attivabile *on demand*
3	ENDOSCOPIA CON ANESTESISTA (NORA)	Personale infermieristico specificamente formato per la gestione routinaria delle criticità intra e periprocedurali con specifico focus sulla complessità procedurale ed assistenziale			Presente sul paziente

Tabella 1 - *Sintesi del modello organizzativo basato su 3 livelli di intensità clinico/assistenziale*

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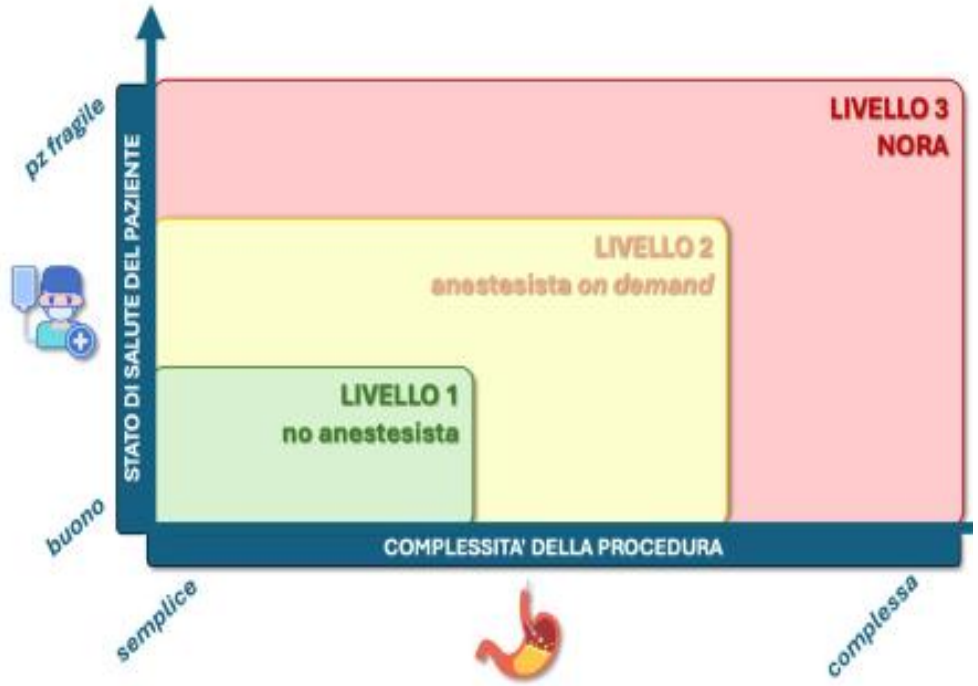

Tabella 2 – *Criteri di allocazione del paziente/procedura nel setting appropriato.*

Nella tabella di seguito sono descritti le procedure ed il relativo setting minimo di trattamento.

Setting minimo LIVELLO 1	Setting minimo LIVELLO 2	Setting minimo LIVELLO 3
• Solo programmato (no urgenze/emergenze, consentita priorità B spec. ambul. - entro 10gg) • Gastroscopia con o senza biopsie • Colonscopia con o senza biopsie • Polipectomie di lesioni < 3 cm • Legatura varici esofagee in elezione (3°- 4° seduta) • Dilatazioni "semplici" in elezione	• Urgenza fra 12 e 24h (o prima se pz stabile e previo confronto con anestesista) • Resezioni endoscopiche di lesioni > 3 cm • EUS + FNA • Dilatazioni endoscopiche • Enteroscopia push • Legatura varici esofagee (dalla seconda seduta) • Radiofrequenza (RF) esofago-gastrica • Trattamento con argon plasma esofago-gastrico-duodenale e colo-rettali • Endomicroscopia confocale • Trattamento di fistole retto-coliche • ESD retto-coliche • Full-thickness resection retto-coliche • VAC therapy rettale • Posizionamento protesi enterali coliche • Legatura-trattamento di varici esofago-gastriche 1°seduta • Trattamento di fistole esofago-gastriche • PEG	• Endoscopia d'urgenza • ERCP (con o senza colangioscopia intraduttale, con o senza litotrissia) • ESD esofago-gastriche • Drenaggi EUS o Rx guidati • GEA EUS guidata • Trattamento di diverticoli esofage (Zenker, medio-distali) e ipertonc del cricofaringe • Posizionamento protesi enterali esofago-gastro-duodenali • VAC therapy esofago-gastrica • Enteroscopia con pallone • Ernioplastica endoscopica e patologia del giunto gastroesofageo • P.O.E.M. (Per-OralEndoscopicMyotomy) • Trattamento di perforazioni • Full-thickness resection upper G • Endoscopia bariatrica

Legenda: ERCP: Endoscopic Retrograde ColangioPancreatografy, EMR:Endoscopic Mucosal Resection, ESD:Endoscopic Submucosal Dissection, EUS: Endoscopic UltraSound, FNA:Fine Needle Aspiration, PEG: Percutaneous Endoscopic Gastrostomy

SAP . Training

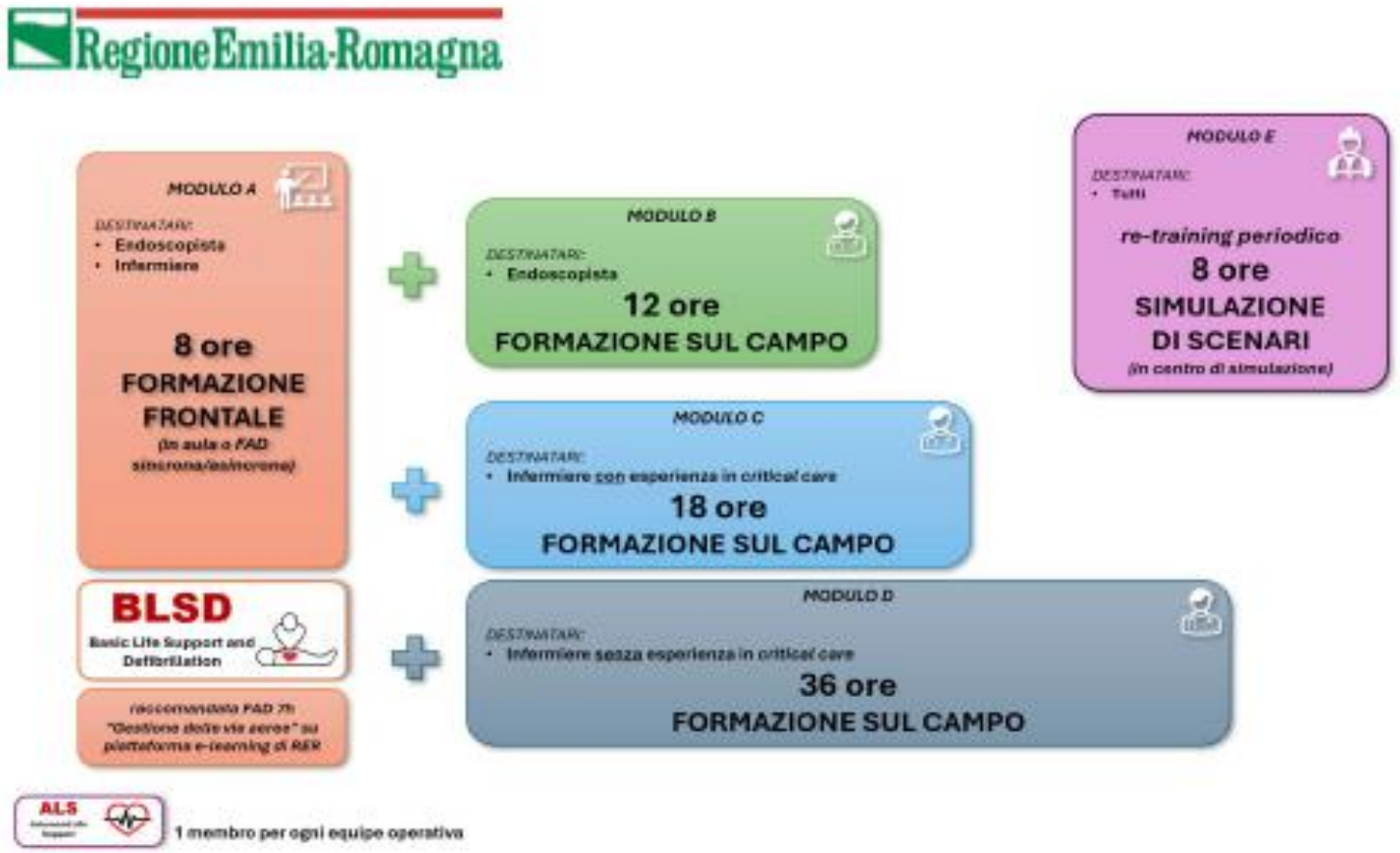

Immagine 2 – *Sintesi del percorso formativo.*


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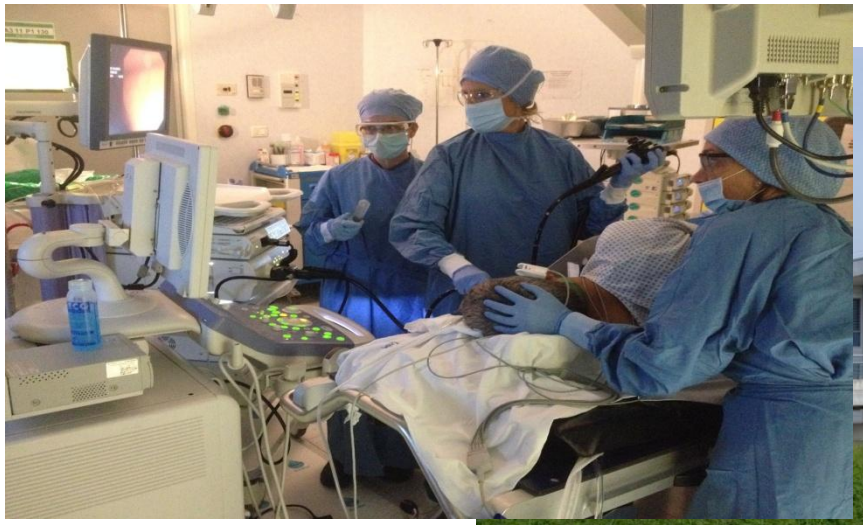
Grazie per l'attezione



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